REVISION HISTORY BG-2T CHASSIS

MODEL

KV-PG21P10

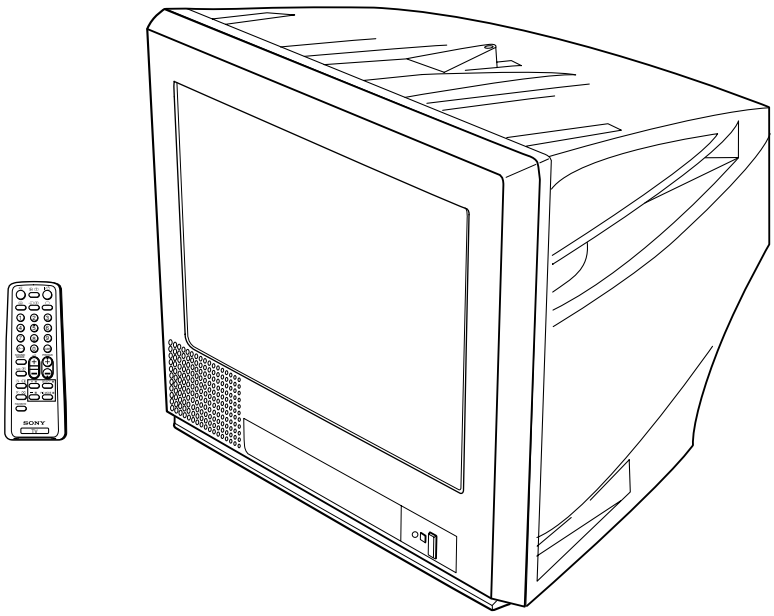
PART NO.: 9-872-254-01

NO	DATE	DESCRIPTION OF REVISION

Self Diagnosis
Supported model

SERVICE MANUAL BG-2T CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-PG21P10	RM-952	Oceania	SCC-U62A-A				



TRINITRON ® COLOR TV

SONY ®

SPECIFICATIONS

			Note
Power requirements	220-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G		
Color system	PAL, PAL 60, NTSC3.58 (AV IN), NTSC4.43		
Channel coverage	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41		
	VHF: 0 to 12, 5A, 19A / UHF: 28 to 69/ CATV: S01 to S03, S1 to S41		Australia only
	VHF: 1 to 11 / UHF: 21 to 69 / CATV: S01 to S03, S1 to S41		New Zealand only
(Antenna)	75-ohm external terminal		
Audio output (Speaker)	3W		
Number of terminal			
Video	Input: 2* Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms	* One input lines available
Audio	Input: 2* Output: 1	Phono jacks; 500 mVrms	* One input lines available
(Earphone)	Output: 1	Monaural minijack	
Picture tube	21 in.		
Tube size (cm)	54		Measured diagonally
Screen size (cm)	51		Measured diagonally
Dimension (w/h/d, mm)	497 x 458 x 487		
Mass (kg)	25		

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Section *Title* *Page*

SELF DIAGNOSTIC FUNCTION 4

1. GENERAL 7

2. DISASSEMBLY
2-1. Rear Cover Removal 11
2-2. Speaker Removal 11
2-3. Chassis Assy Removal 11
2-4. F Board Removal 11
2-5. Service Position 11
2-6. Terminal Bracket Removal 11
2-7. Replacement Of Parts 12
2-7-1. Replacement of Light Guide 12
2-7-2. Replacement of Power Button 12
2-8. Picture Tube Removal 12

3. SET-UP ADJUSTMENTS
3-1. Beam Landing 13
3-2. Convergence 14
3-3. Focus Adjustment 16
3-4. G2 (SCREEN) and White Balance Adjustments ... 16

4. CIRCUIT ADJUSTMENTS
4-1. Adjustment With Commander 17
4-2. Adjustment Method 17
4-3. Picture Quality Adjustment 22
4-4. Deflection Adjustment 22
4-5. A Board Ajustment After IC003 (MEMORY) Replacement 22
4-6. Picture Distortion Adjustment 23

Section *Title* *Page*

5. DIAGRAMS
5-1. Block Diagram 25
5-2. Circuit Boards Location 27
5-3. Schematic Diagram 28
(1) Schematic Diagram of A (1/2) Board 29
(2) Schematic Diagram of A (2/2) Board 31
(3) Schematic Diagram of CV Board 33
(4) Schematic Diagram of F Board 34
5-4. Voltage Measurement 35
5-5. Waveforms 38
5-6. Printed Wiring Boards and Parts Location 39
5-7. Semiconductors 43

6. EXPLODED VIEWS
6-1. Picture tube and Chassis 44

7. ELECTRICAL PARTS LIST 45

SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

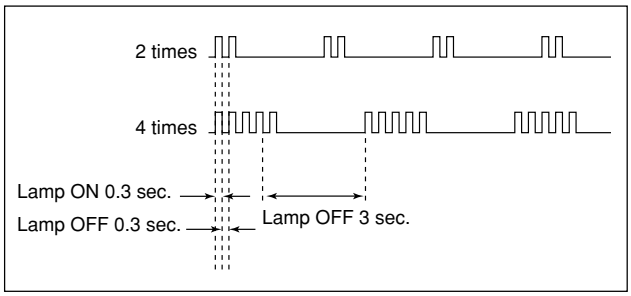
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F4601 (F)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) • Horizontal deflection overdrive	2 times	002:000 or 002:001~255	• H.OUT Q511 is shorted. (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE) • Vertical deflection stopped	4 times	004:000 or 004:001~225	• -13V is not supplied. (A board) • IC 503 faulty (A board)	• Vertical deflection pulse is stopped
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (CV Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

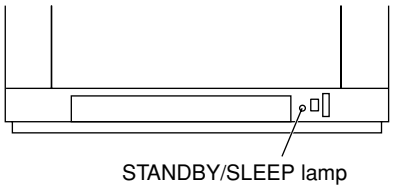
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage	2 times
Vertical deflection stopped	4 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

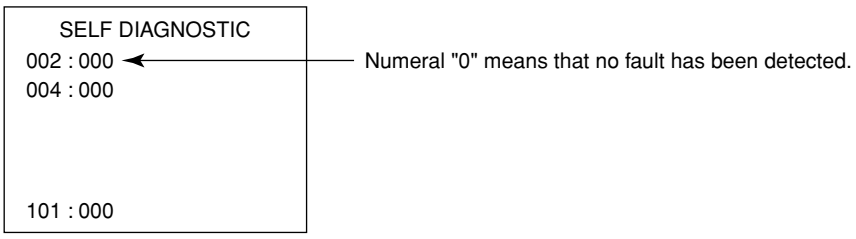
[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display



5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

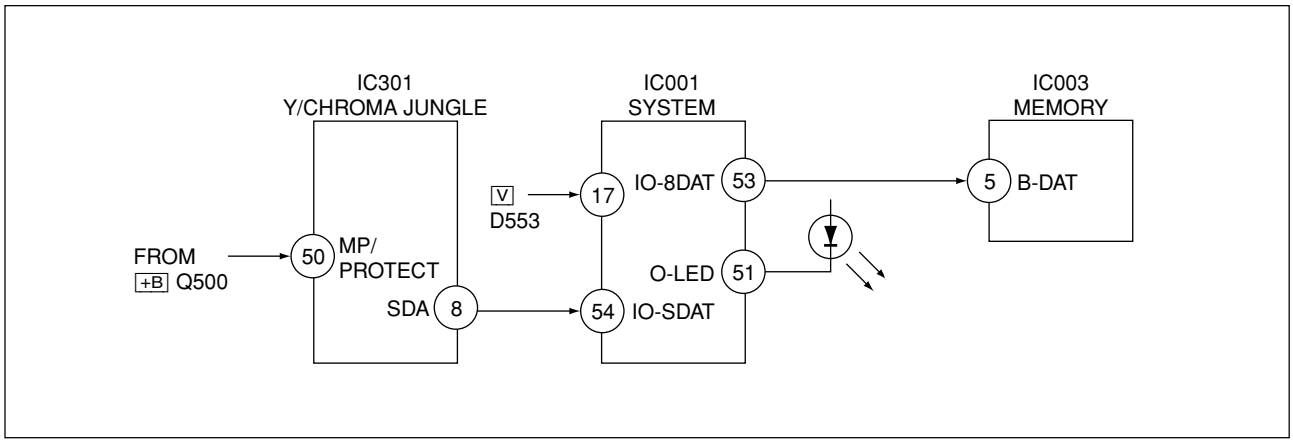
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT



[+B overcurrent (OCP)]	Occurs when an overcurrent on the +B(135) line is detected by Q500. If Q500 go to ON and the voltage to pin 50 of IC301 more than 3.5V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
[Vertical deflection stopped]	Occurs when an absence of the vertical deflection pulse is detected by Pin 17 and IC001 shut down the power supply.
[White balance failure]	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture. * (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

SONY

4-083-897-**11** (1)

FD Trinitron
WEGA

Trinitron Color TV

Operating Instructions

- Before operating the unit, please read this manual thoroughly and retain it for future reference.

KV-PG21
KV-PG14

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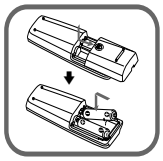
P10

SECTION 1
GENERAL

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

A Getting Started

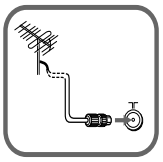


Step 1

Insert the batteries (supplied) into the remote.

Note

- Do not use old batteries nor use different types of batteries together.

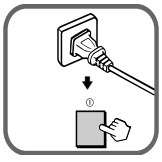


Step 2

Connect the antenna cable (not supplied) to ⅂ at the rear of the TV.

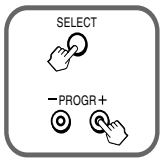
Tip

- You can also connect your TV to other optional components. (See E)



Step 3

Plug in the power cord, then press ⏻ on the TV to turn it on.

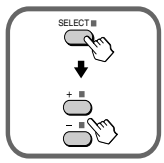


Step 4

Press SELECT and PROGR + on the TV at the same time for one to two seconds to preset the channels automatically. (See J)

Tip

- To stop the automatic channel presetting, press SELECT twice.

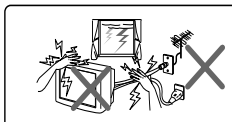


Step 5

Press SELECT on the remote until "LANGUAGE/语言: ENGLISH" appears on the screen, then press + or – to change the on-sceen display language.

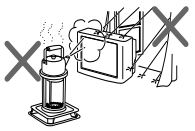
B WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220 – 240 V AC.
- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

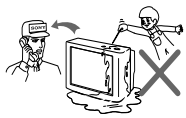


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

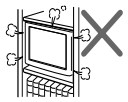
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



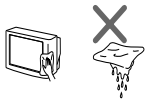
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



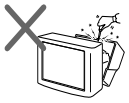
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



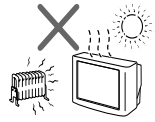
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.

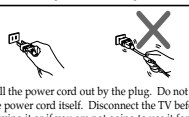


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.



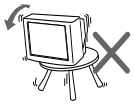
Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)

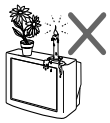


Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.

Do not plug in too many appliances to the same power socket. Do not damage the power cord.



Do not install the TV in an unstable position. Use a proper TV stand.

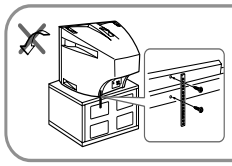


Do not place any objects on the TV.

C Securing the TV

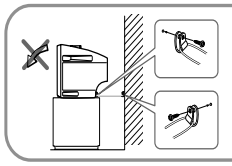
▶ **KV-PG21P10 only**

To prevent the TV from falling, use the supplied screws, clamps and band to secure the TV.



Screw the band to the TV stand and to the provided hole at the rear of your TV.

or

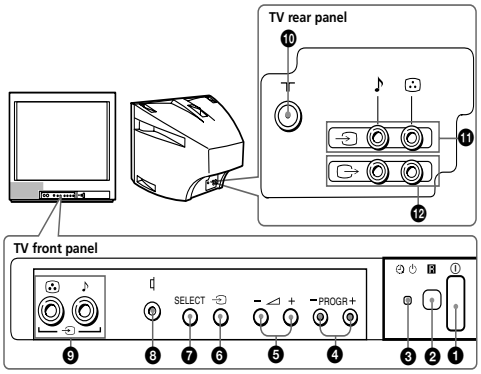


(1) Put a cord or chain through the clamps.
(2) Screw one clamp to a wall or pillar and the other clamp to the provided hole at the rear of your TV.

Note

- Use only the supplied screws. Use of other screws may damage the TV.

D TV front and rear panels

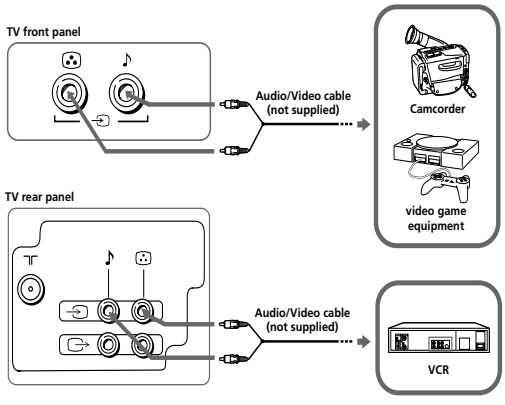


Button	Function
❶ ⏻	Turn off completely or turn on the TV.
❷	Remote control sensor.
❸ ⏻	Standby indicator.
❸	Wake Up indicator.
❹ PROGR +/–	Select program number.
❺ +/– *	Adjust volume.
❻	Select TV or video input.
❼ SELECT	Select the desired item.
❽	Earphone terminal.
❾, ⓫	Video input terminal.
❿	Antenna terminal.
⓬	Monitor output terminal.

* You can also use the +/– buttons on the TV to work as the +/– buttons on the remote.

E Connecting optional components

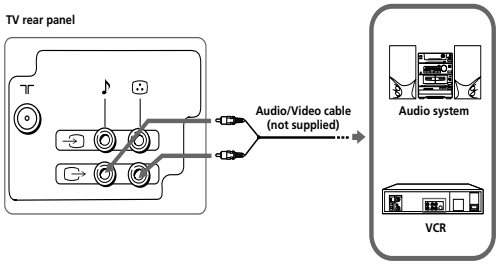
Connecting to the video input terminal ( )



Note

- Do not connect video equipment to (video input) at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting to the monitor output terminal ( )



F Troubleshooting

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer.

Symptom	Solutions
Snowy picture, noisy sound	• Check the antenna cable and connection on the TV, VCR and on the wall. • Preset the channel manually again. (See J) • Check the antenna setup. Contact a Sony dealer for advice.
No picture, no sound	• Check the power cord, antenna and the VCR connections. • Press I/⏻ (power) or ⏻ (main power) to turn on the TV.
Good picture, no sound	• Press + to increase the volume level. • Press to cancel the muting.
Dotted lines or stripes	• Do not use a hair dryer or other equipment near the TV. • Check the antenna setup. Contact a Sony dealer for advice.
Double images or "ghosts"	• Use the fine tuning ("FINE") function. • Turn off or disconnect the booster if it is in use. • Check the antenna setup. Contact a Sony dealer for advice.
No color	• Select the appropriate color system. (See J) • Adjust the color level. • Check the antenna setup. Contact a Sony dealer for advice.
Abnormal color patches	• Keep external speakers or other electrical equipment away from the TV. Press ⏻ (main power) to turn off the TV for about 15 minutes, then turn it on again to demagnetize the TV.
The ⏻ (standby) indicator on your TV flashes red several times after every three seconds.	• Count the number of times the ⏻ (standby) indicator flashes. Press ⏻ (main power) to turn off your TV. Contact your nearest Sony service center.
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.

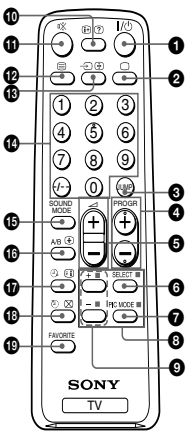
G Specifications

	KV-PG14P10	KV-PG21P10	Note
Power requirements	220-240 V AC, 50/60 Hz		
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G		
Color system	PAL, PAL 60, NTSC3.58 (AV IN), NTSC4.43		
Channel coverage	VHF: E2 to E12 UHF: E21 to E69 CATV: S01 to S03, S1 to S41		
	VHF: 0 to 12, 5A, 19A UHF: 28 to 69 CATV: S01 to S03, S1 to S41		Australia only
	VHF: 1 to 11 UHF: 21 to 69 CATV: S01 to S03, S1 to S41		New Zealand only
⏉ (Antenna)	75-ohm external terminal		
Audio output (Speaker)	3W		
Number of terminal			
(Video)	Input: 2* Output: 1	Phono jacks; 1 Vp-p, 75 ohms	* One input line available
♪ (Audio)	Input: 2* Output: 1	Phono jacks; 500 mVrms	* One input line available
(Earphone)	Output: 1	Monaural minijack	
Picture tube	14 in.	21 in.	
Tube size (cm)	37	54	Measured diagonally
Screen size (cm)	34	51	Measured diagonally
Dimensions (w/h/d, mm)	375 x 346 x 411	497 x 458 x 487	
Mass (kg)	12	25	

Design and specifications are subject to change without notice.

Sony online
http://www.world.sony.com/

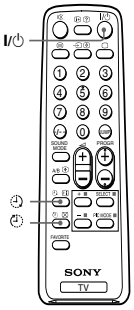
H Remote control



Button	Function	See
❶ I/⏻	Turn off temporarily or turn on the TV.	–
❷ ▢	Display the TV program.	–
❸ JUMP	Jump to previous channel.	–
❹ PROGR +/–	Select program number.	–
❺ +/–	Adjust volume.	–
❻ SELECT	Select the desired item.	–
❼ PIC MODE	Select picture mode.	K
❾ +/–	Adjust items.	–
❿	Display on-screen information.	–
⓫	Mute the sound.	–
⓬	Select TV or video input.	–
⓮ 0 – 9, -/--	Input numbers.	–
Timer operations		
⓱	Set TV to turn on automatically.	I
⓲	Set TV to turn off automatically.	I
⓯ SOUND MODE	Not function for your TV.	–
⓰ A/B	Not function for your TV.	–
Teletext operations		
❽ ■ (red, green, yellow, blue)	Not function for your TV.	–
❿		
⓬		
⓭		
⓳		
⓱		
⓲		
⓳ FAVORITE	Not function for your TV.	–

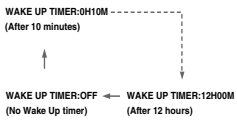
I Setting the timers

You can turn on and off your TV by using the ⏲ and ⏲ buttons respectively.



Setting the Wake Up timer

1 Press ⏲ until the desired period of time appears on the screen.



The Wake Up timer starts immediately after you have set it.

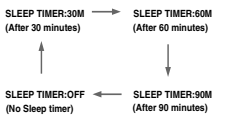
2 Select the TV channel or video input you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.

The ⏲ indicator on the TV lights up orange when the TV goes into standby mode.

Setting the Sleep timer

Press ⏲ until the desired period of time appears on the screen.



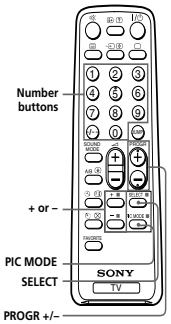
The Sleep timer starts immediately after you have set it.

Notes

- You can also cancel the Wake Up and Sleep timers by turning off the TV's main power.
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode.

J Presetting channels

You can automatically preset up to 100 TV channels in numerical sequence from program number 1, or manually preset desired channels and channels that cannot be preset automatically.



Presetting channels automatically from a specified program number

1 Press SELECT until "AUTO PROGRAM" appears on the screen.

2 Press + or – once to enter the "AUTO PROGRAM" mode.

The on-screen display will start flashing.

3 Press PROGR +/– or the number buttons until the desired program number appears on the screen.

4 Press + or – to start presetting channels automatically.

Presetting channels manually

1 Press SELECT until "MANUAL PROGRAM" appears on the screen.

2 Press + or – once to enter the "MANUAL PROGRAM" mode.

3 Press PROGR +/– or the number buttons until the desired program number appears on the screen.

4 Press + or – until the desired channel picture appears on the screen.

5 To preset other channels manually, repeat steps 3 to 4.

Presetting channels (continued)

To change the color system setting

If the color is abnormal when receiving programs through the ⅂ (antenna) terminal or the ⇥ (video input) jack

(1) Press SELECT until "COLOR SYSTEM" appears on the screen.

(2) Press + or – to select the appropriate color system until the color is optimal.

AUTO → PAL → NTSC3.58 → NTSC4.43

To skip program numbers

(1) Press PROGR +/– or the number buttons until the unused or unwanted program number appears on the screen.

(2) Press SELECT until "MANUAL PROGRAM" appears on the screen.

(3) Press + or – once to enter the "MANUAL PROGRAM" mode.

(4) Press PIC MODE to skip the unused or unwanted program number.

(5) Press SELECT to exit the "MANUAL PROGRAM" mode.

Note

- To restore the skipped program number again, preset the channel automatically or manually.

To use the fine tuning function

The fine tuning (FINE) function may help to reduce the following problems: double images and lines moving across the TV screen.

You can use the fine tuning function as below:

(1) Select the program number you want to adjust.

(2) Press SELECT until "MANUAL PROGRAM" appears on the screen.

(3) Press + or – once to enter the "MANUAL PROGRAM" mode.

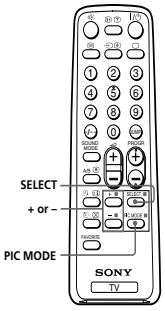
(4) Press ⓫ to display "FINE" on the screen.

(5) Press + or – continuously until the above problems are minimized.
The + or – icon on the screen flashes while tuning.

(6) Press SELECT to exit the "MANUAL PROGRAM" mode.

K Customizing the picture

You can customize the picture by selecting the picture mode or by adjusting its settings.



Selecting the picture mode

Press PIC MODE to select the desired picture mode.

Select	To
"DYNAMIC"	view high contrast pictures.
"STANDARD"	view normal contrast pictures.
"SOFT"	view mild pictures.

Adjusting the picture setting

1 Press SELECT until the desired setting appears.

Each time you press SELECT, the setting item will change as follows:

PICTURE → COLOR → BRIGHT → HUE → SHARPNESS → PICTURE

2 Press + or – to adjust the item.

3 To adjust other items, repeat steps 1 to 2.

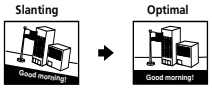
Notes

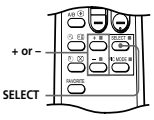
- "HUE" can be adjusted for the NTSC color system only.
- Reducing "SHARPNESS" can also reduce picture noise.

L Adjusting the picture position

▶ **KV-PG21P10 only**

If the picture is slanting, you can adjust the picture position using the "PIC ROTATION" function until it is optimal.





1 Press SELECT repeatedly until "PIC ROTATION" appears on the screen.

2 Press + or – to adjust the picture position.

The ⊟ or ⊟ icon on the screen flashes while adjusting.

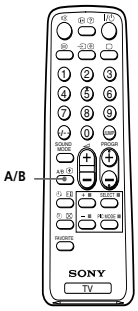
Note

- To reduce the slanting picture, keep external speakers or other electrical equipment away from the TV.

M Enjoying stereo or bilingual programs

▶ **Not function for your TV**

You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems by using the A/B button.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Notes

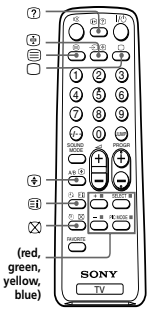
- If the stereo sound is noisy when receiving a stereo program, select "MONO". The sound becomes monaural, but the noise is reduced.
- If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal, press A/B repeatedly until "MONO" appears on the screen. To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

N Viewing Teletext

▶ **Not function for your TV**

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

You can use the buttons on the remote to view Teletext.



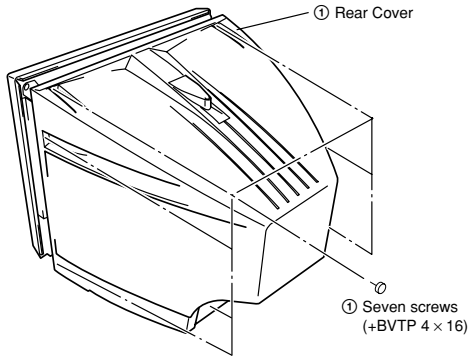
To	Do this
display a Teletext page on the TV picture	Press ☰. Each time you press ☰, the screen changes as follows: Teletext → Teletext and TV → TV. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.
check the contents of a Teletext service	Press ⊟. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page. If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/–.
hold (pause) a Teletext display	Press ⊕ to display the symbol "⊛" at the top left corner of the screen. To resume normal Teletext viewing, press ⊕ or ☰.
reveal concealed information (e.g., an answer to a quiz)	Press ?. To conceal the information, press the button again.
enlarge the Teletext display	Press ⊕. Each time you press ⊕, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ☰ to show the text.
select a FASTEXT menu or the colored boxes	Press ■ (red, green, yellow and blue) that corresponds to the desired menu or page number.
turn off Teletext	Press ▢.

Note

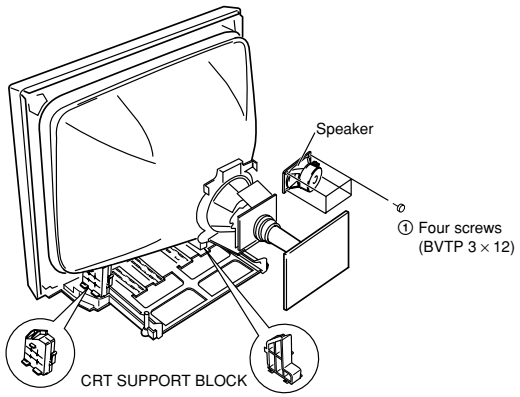
- The FASTEXT feature can be used only when the FASTEXT broadcast is available.

SECTION 2
DISASSEMBLY

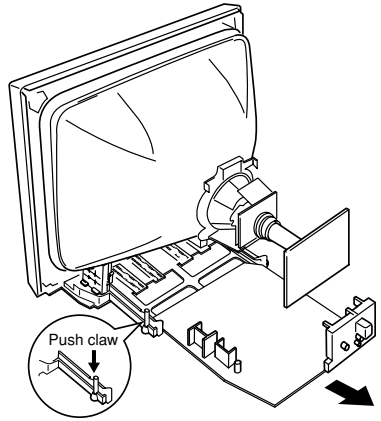
2-1. REAR COVER REMOVAL



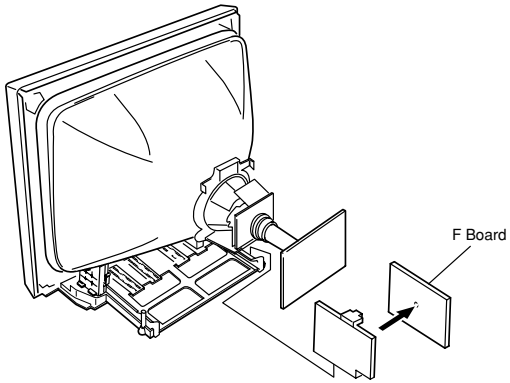
2-2. SPEAKER REMOVAL



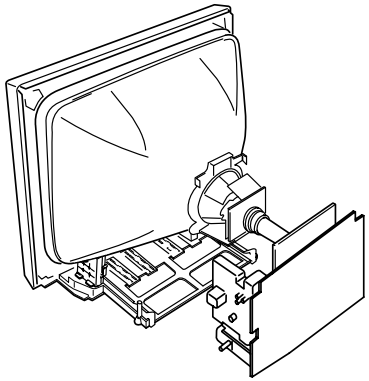
2-3. CHASSIS ASSY REMOVAL



2-4. F BOARD REMOVAL



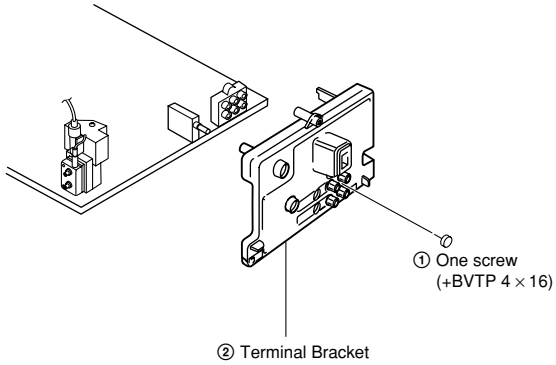
2-5. SERVICE POSITION



Caution: Do not take out CRT support block while TV set in standing position.

Note: Undress necessary wires that creates tension while placing the chassis into Service Position.

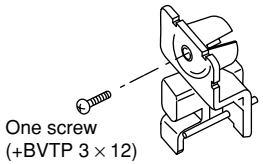
2-6. TERMINAL BRACKET REMOVAL



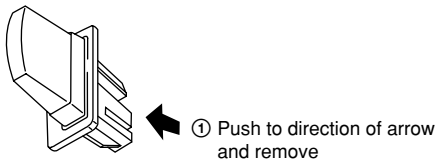
2-7. REPLACEMENT OF PARTS

For replacements of light guide,unscrew them, exchange with new parts and fix them with screws respectively.

2-7-1. Replacement of Light Guide



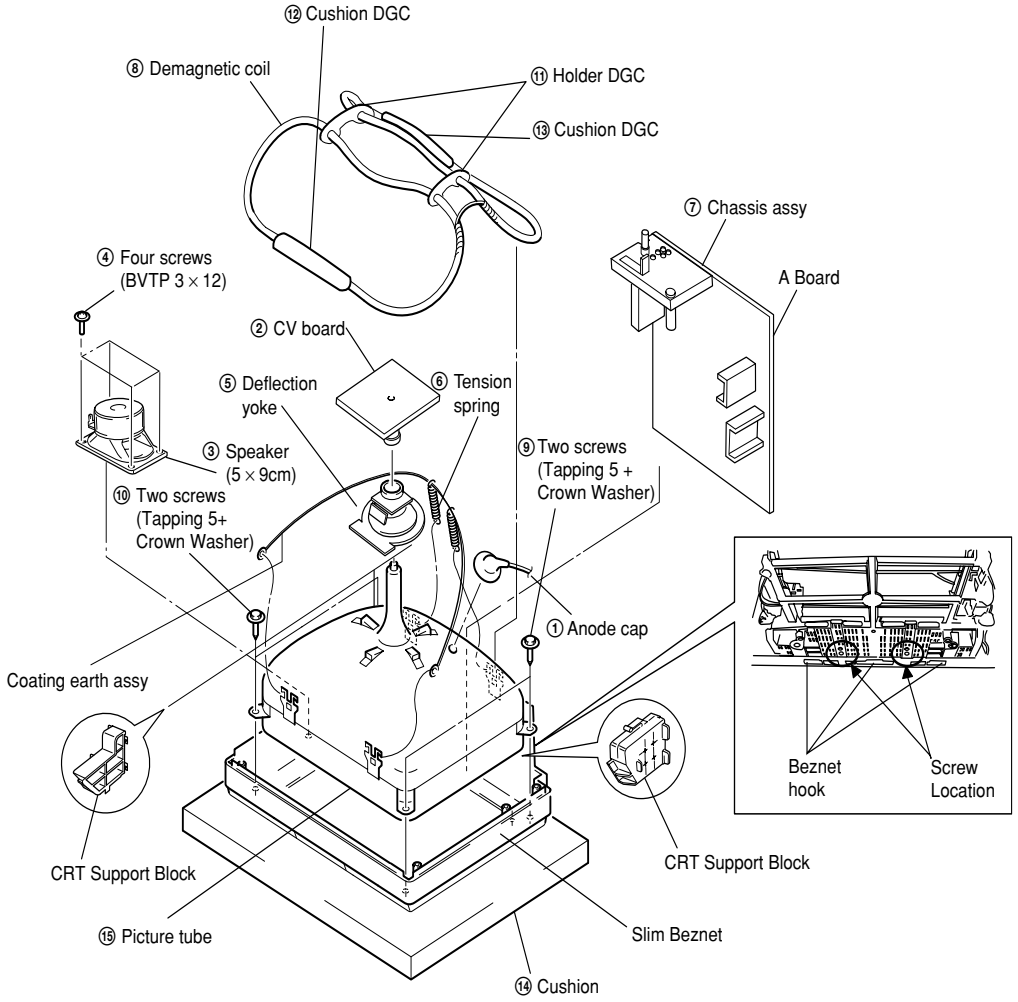
2-7-2. Replacement of Power Button



2-8. PICTURE TUBE REMOVAL

Note:

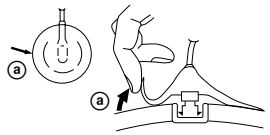
- The picture tube for Oceania model is upside down, and the position for the anode cap and the tension spring are changed accordingly.
- Please make sure the TV set is not in standing position before removing necessary CRT support located on bottom right and left.



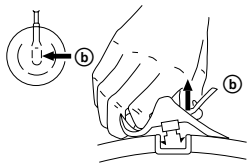
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

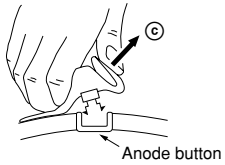
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



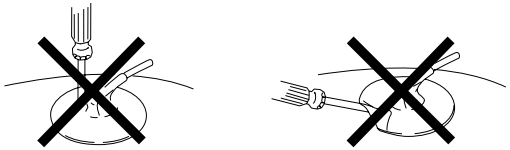
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Do not damage the surface of anode-caps with sharp shaped objects.
② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Set the pattern generator raster signal to a green raster.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 3-1 through 3-4.)
4. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 3-4.)

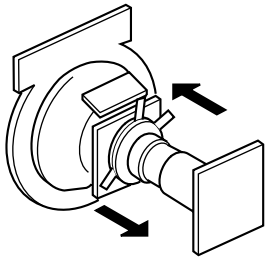


Fig. 3-1

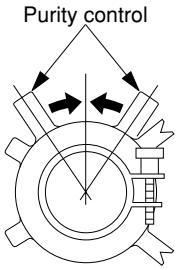


Fig. 3-2

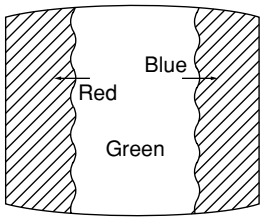


Fig. 3-3

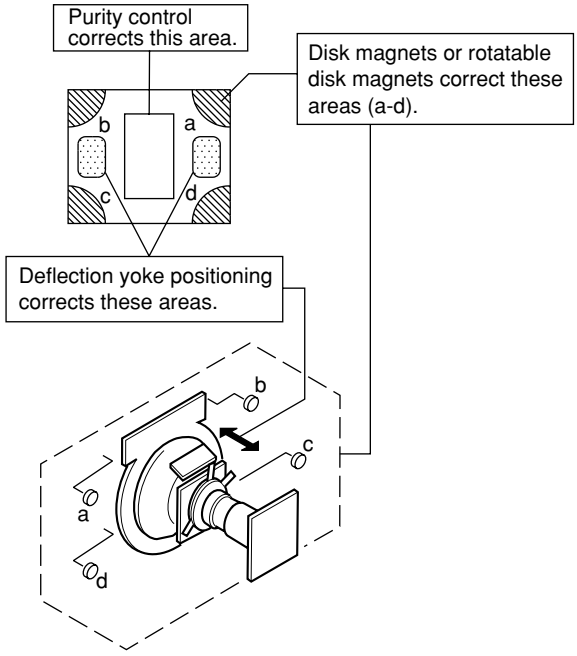


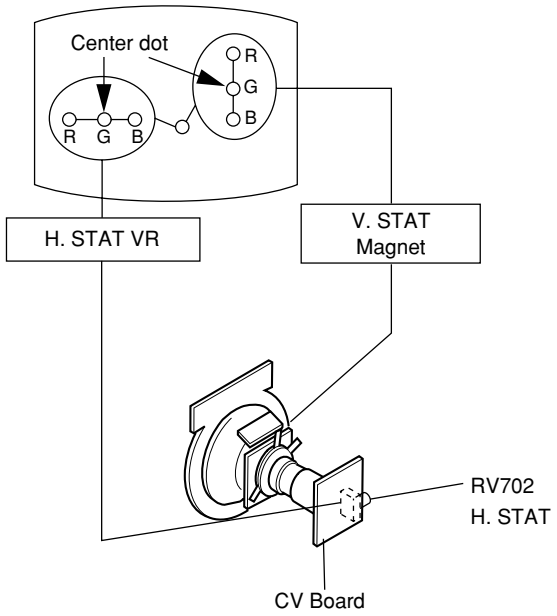
Fig. 3-4

3-2. CONVERGENCE

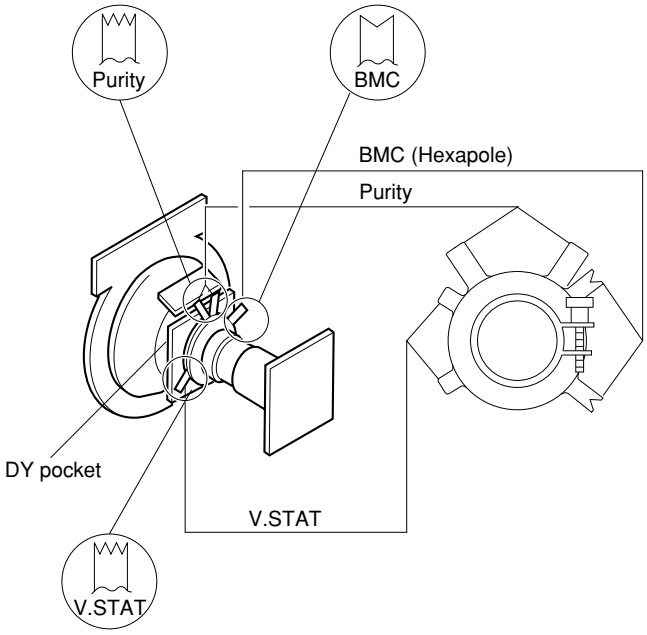
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Soft.

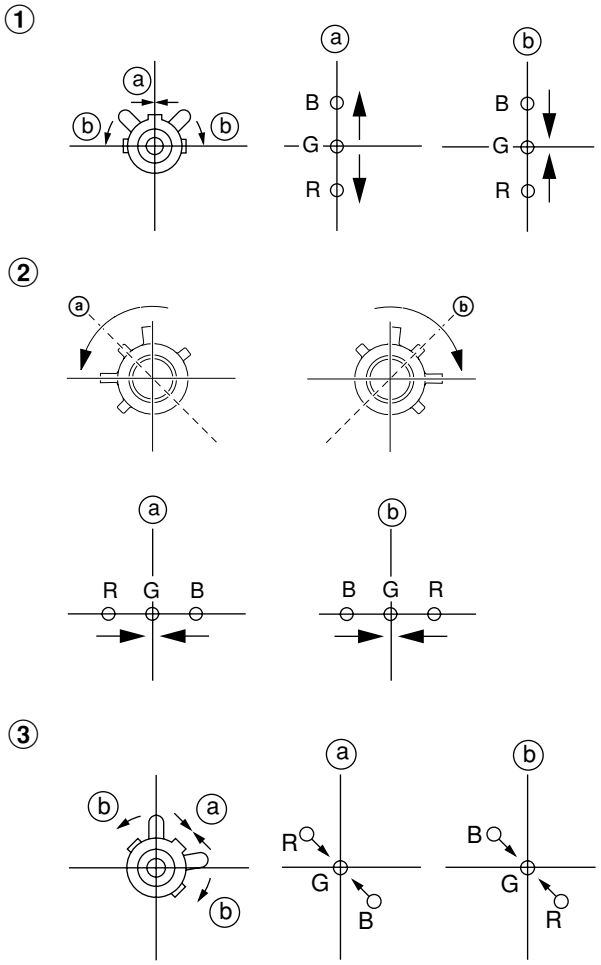
(1) Horizontal and Vertical Static Convergence



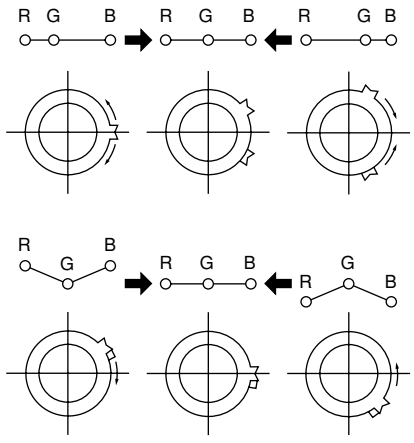
1. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving horizontally), adjust the H.STAT VR control so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)



- Operation of V. Stat magnet
  If the V. Stat magnet is moved in the "a" and "b" arrows, the red, green and blue dots move as shown below.



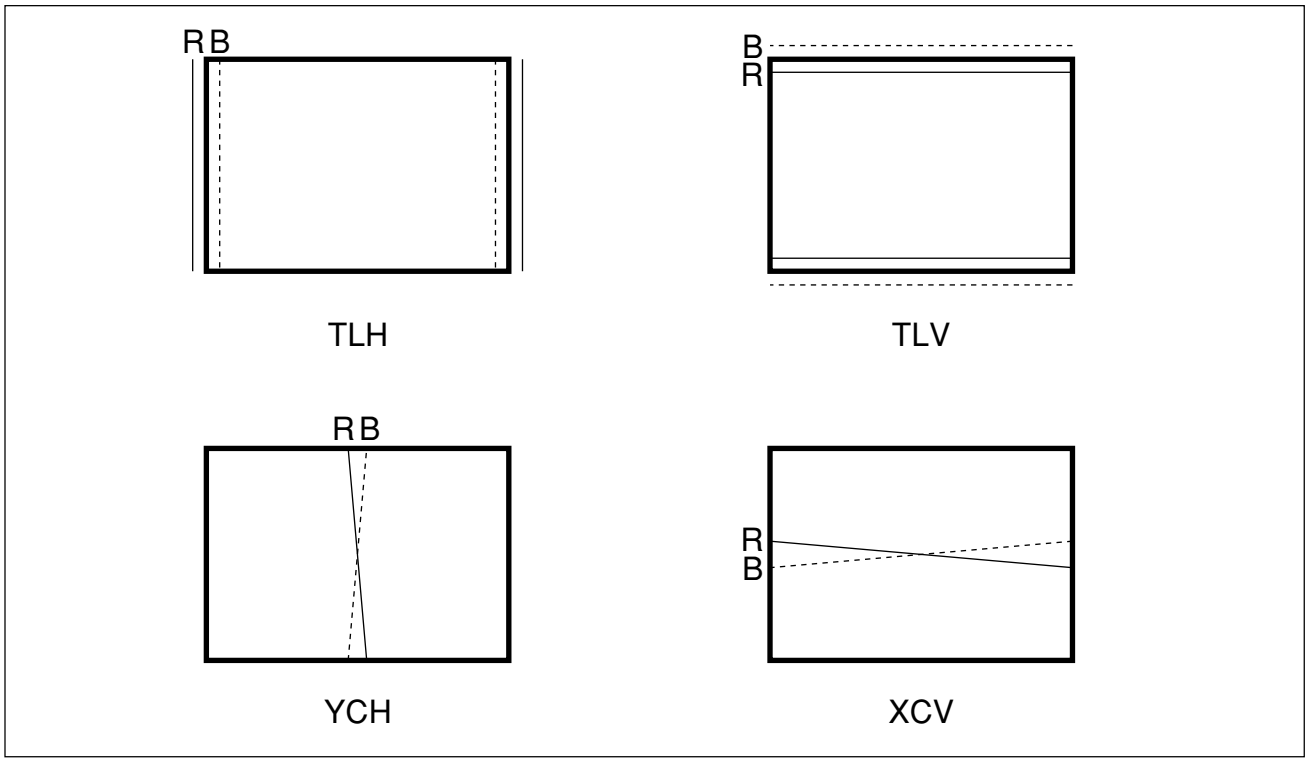
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



(2) Dynamic Convergence Adjustment

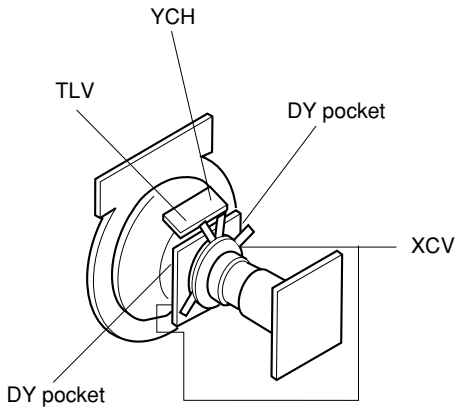
Preparation:

Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

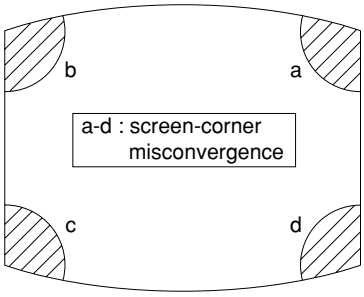


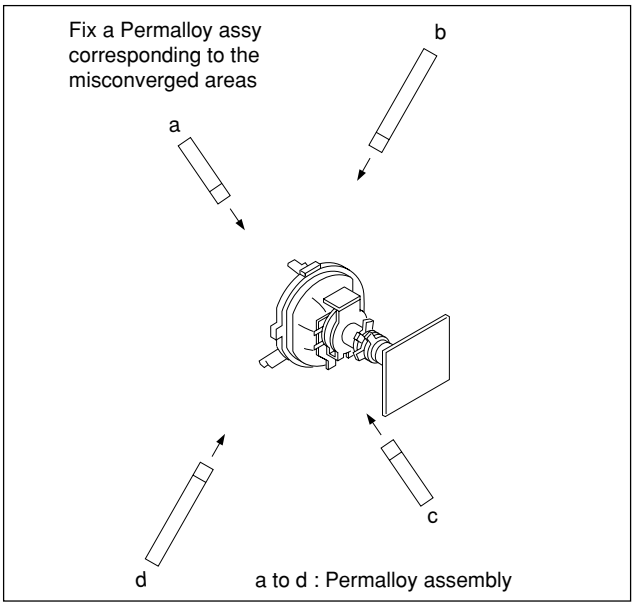
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)
YCH	Rotate	YCH	VOL on DY
TLV	Rotate	TLV	VOL on DY
XCV	Rotate	XCV	Adj core on DY

ON DY:



(3) Screen-corner Convergence

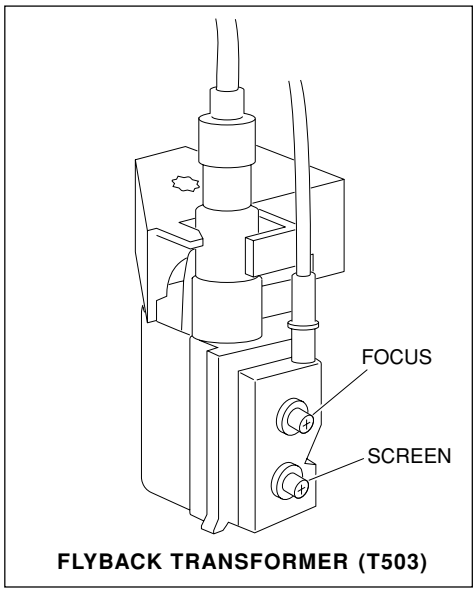




3-3. FOCUS ADJUSTMENT

FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. Adjust focus VR so that the center of screen becomes just focus.
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticeable. Incase magenta is very obvious, adjust focus VR to take balance of magenta ring and focus.

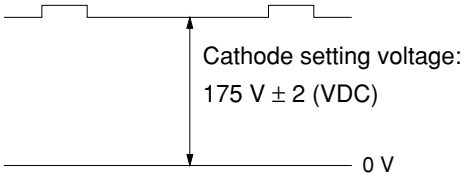


FLYBACK TRANSFORMER (T503)

3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the CV board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

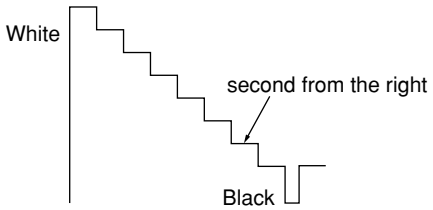


2.a) WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 4-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set 49 (ABL) and IF (VP2) service mode to 00.
4) Set Picture to DYNAMIC.
5) Select OB (RDR) with [1] and [4], and set the level 25 with [3] and [6] for best white balance.
6) Select OC 'GDR' and OD 'BDR' with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].
8) Set back 49 'ABL' and IF 'VP2' service mode to original data.

2.b) SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Set 49 (ABL) and IF (VP2) service mode to 00.
3) Input a staircase signal of black to white from the pattern generator.
4) BRIGHTNESS .... 50%.
   PICTURE ..... MINIMUM
5) Select OE 'SBR' with [1] and [4], and adjust OE 'SBR' level with [3] and [6] so that the second stripe from the right is dimly lit.
6) Write into memory by pressing [MUTING] then [0].
7) Set 49 (ABL) and IF (VP2) service mode to original data.



SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENT WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-952

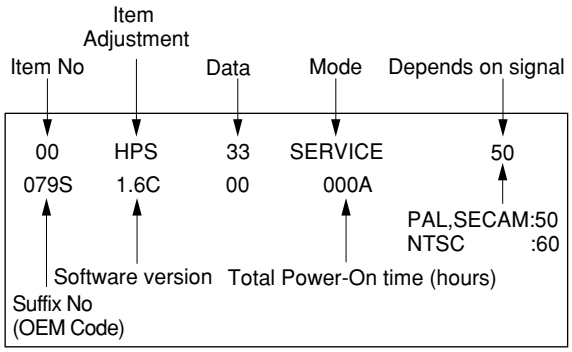
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data value.
↓	
[MUTING]	Writes.
↓	
[0]	Executes the writing.

e. OTHER FUNCTION VIA REMOTE COMMANDER

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[2], [0]	Copy and write all data.
[MUTE], [0]	Write 50Hz adjustment data to 60Hz or vice versa.

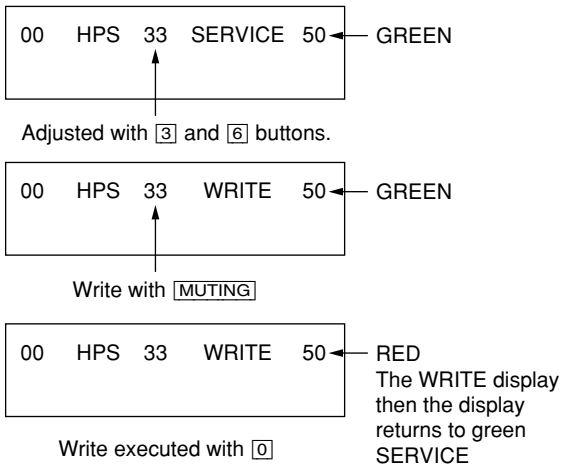
4-2. ADJUSTMENT METHOD

Item Number 00 HPS

This explanation uses H Shift as an example.

1. Select "00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-


00 HPS 33 SERVICE 50
GREEN
Adjusted with 3 and 6 buttons.
00 HPS 33 WRITE 50
GREEN
Write with MUTING
00 HPS 33 WRITE 50
RED
The WRITE display then the display returns to green SERVICE
Write executed with 0

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

Item No.	Adj. Item	Data Range	Initial Data	Note for Different Data	Function	Device
00	HPS	00–3F	24	50/60Hz	H Position	TDA8843/44(8A)
01	HSZ	00–3F	23	50/60Hz	H Size	
02	PAP	00–3F	21	50/60Hz	Pin Amplitude	
03	CPN	00–3F	29	50/60Hz	Corner Pin	
04	TLT	00–3F	20	50/60Hz	Tilt	
05	VSL	00–3F	20	50/60Hz	V Slope	
06	VAP	00–3F	1D	50/60Hz	V Amplitude	
07	SCO	00–3F	20	50/60Hz	S Correction	
08	VPS	00–3F	20	50/60Hz	V Shift	
09	VZM	00–3F	19		Vertical Zoom	
0A	VSC	00–3F	20	50/60Hz	Vertical Scroll	
0B	RDR	00–3F	25	Dynamic/Others	R Drive	
0C	GDR	00–3F	25	Dynamic/Others	G Drive	
0D	BDR	00–3F	25	Dynamic/Others	B Drive	
0E	SBR	00–7F	4B		Sub Brightness	
0F	PMX	00–3F	27	TV/Video/Teletext	Picture Maximum Data	
10	PMI	00–3F	05		Picture Minimum Data	
11	SHU	00–0F	07	TV/Video	Sub Hue	
12	SSH	00–03	01	TV/Video	Sub Sharpness	
13	SC1	00–3F	1F	50/60Hz	Sub Color Lower	
14	SC2	00–3F	0B	50/60Hz	Sub Color Higher	
15	FO	00–03	00	TV/Video/Teletext	01 Time Constant	
16	AGT	00–3F	30	TV/Video/Teletext	AGC Take Over	
17	VSW	00–01	0	TV/Video/Teletext	Video Mute Switch	
18	FOR	00–03	00		Forced Field Frequency	
19	DL	00–01	0		De-interlace	
1A	POC	00–01	0		Fixed 01 Synchro. Mode	
1B	COR	00–01	0	TV/Video/Teletext	Noise Coring	
1C	RBL	00–01	0	TV/Video/Teletext	RGB Blanking	
1D	YDL	00–0F	08	PAL/NTSC/SECAM	Y-Delay	
1E	VP1	00–FF	00		Extra Bits (see page 20)	
1F	VP2	00–FF	01		Extra Bits (see page 20)	
20	VP3	00–FF	08		Extra Bits (see page 20)	
21	WST	00–FF	15		W/G Stereo Threshold	MSP3417G(80)
22	WBT	00–FF	EA		W/G Bilingual Threshold	
23	WLL	00–FF	05		W/G Monaural Threshold	
24	WAC	00–0F	00		W/G Agreement count	
25	WDL	00–FF	30		W/G Search Delay	
26	NDL	00–FF	20		NICAM Search Delay	
27	SDL	00–FF	10		Stereo Status Read Delay	
28	AGC	00–01	01		AGC Switch auto/constant	
29	REL	00–3F	28		AGC Gain at Constant Mode	
2A	CRM	00–01	0		Carrier Muting on/off	
2B	ACO	00–01	1		Audio Clock-out on/off	
2C	FP	00–7F	1B		FM Prescale for B/G, I, D/K	
2D	FPM	00–7F	32		FM Prescale for M	
2E	FH	00–7F	36		FM Prescale for HDEV (non-M)	
2F	FHM	00–7F	65		FM Prescale for HDEV (M)	
30	WGP	00–7F	2A		W/G Prescale	
31	NIP	00–7F	6D		NICAM Prescale	
32	ERR	00–FF	50		Auto FM Switch Threshold	
33	VOL	00–7F	73		DFP Volume Maximum	
34	ING	00–0F	00	M System/non-M/Video	Input Gain	TDA7438(88)
35	VOM	00–3F	01	M System only	Volume Output Gain	
36	BCS	00–03	01		Bass Center Shift	
37	TCS	00–03	01		Treble Center Shift	
38	TXH	00–FF	2D		Horizontal Display Position	SAA5264(58)
39	TXV	00–3F	2A		Vertical Display Position (line offset from V-sync)	
3A	THD	00–7F	00		H-sync Active Edge Shift	
3B	TVD	00–7F	0F		V-sync Active Edge Shift	
3C	HPL	00–01	00	00:Positive, 01:Negative	H-sync Polarity Configuration	
3D	VPL	00–01	00	00:Positive, 01:Negative	V-sync Polarity Configuration	
3E	FPL	00–01	00	00:V-sync second half line, 01:V-sync first half line	Field Polarity Configuration	
3F	FMD	00–03	02	00:Auto, 01:Default, 02:Fastext, 03:Top mode	Force Mode	

Adjustment Item Table

Item No.	Adj. Item	Data Range	Initial Data	Note for Different Data	Function	Device
40	TBR	00-0F	08		Set Teletext RGB Brightness	SAA5264(58)
42	TCH	00-03	01		Twisted Character Set Configuration	
43	BKP	00-3F	00	00 : Positive, 01 : Negative	Picture Data at Blanking OFF	
44	ODL	00-FF	10		Power ON Delay	Other Control
45	OSH	00-3F	0A		OSD H Position	
46	TSH	00–03	00	00:B/G, 01:I, 02:D/K, 03:M	TV System at Auto Preset	
47	DKS	00–01	01		D/K Stereo enable/disable	
48	MUT	00–01	00		Muting on/off at No Sync	
49	ABL	00–01	00		Bright ABL Switch	
4A	SCM	00–01	00		SECAM Trap active/inactive	
4B	SLS	00–01	01		Active SL.OR.IFI Sync	
4C	SSV	00–07	02		Space Sound Volume Step Up	
4D	VPW	00–7F	28		Timer of Video Processor start up wait	
4E	OP1	00–FF	2F		Optional Flags 0 (see page 20)	
4F	OP2	00–FF	0F		Optional Flags 1 (see page 20)	
50	OP3	00–FF	00		Optional Flags 2 (see page 20)	

NOTE

- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory.
  In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

ITEM INFORMATION

No. 1E VP1

Item	-	-	BCO	OSO	SBL	HBL	FCO	FFI
KV-PG21P10	*	*	0	0	0	0	0	0

BCO	Switch-on behaviour 1=Switch -on of picture via internal delay 0=Without delay	00(4)
OSO	1=Switch off in vertical overscan 0=Switch-off undefind	18(7)
SBL	Service blanking Mode 1= on 0= off	0B(7)
HBL	RGB Blanking Mode 1 = wide blanking, 0 = normal blanking	02(7)
FCO	Forced Color-on 1=no colour killer 0=normal colour killer function	1B(0)
FFI	Fast filler IF-PLL 1=increased time constant 0=normal time constant	1A(1)

No. 1F VP2

Item	-	-	MAT	DS	DSA	EBS	BLS	BKS
KV-PG21P10	*	*	0	0	0	0	0	1

MAT	PAL-SECAM-/NTSC Matrix 1 =PAL matrix, 0=adapted to standard	0E(7)
DS	Dynamic skin control on/off 1= on 0= off	1A(3)
DSA	Dynamic skin control angle 1=correction angle 117 degrees 0=correction angle 123 degrees	1A(2)
EBS	Extended Blue Stretch 1= on 0= off	1A(1)
BLS	Blue stretch 1= on 0= off	18(4)
BKS	Black stretch 1= on 0= off	18(3)

No. 20 VP3

Item	BB	AKB	BPS	CB	ACL	CL2	CL1	CL0
KV-PG21P10	0	0	0	0	1	0	0	0

BB	Blue back when no video signal is identified 1= on 0= off	18(0)
AKB	Black current stabilisation 1=not active 0=active	02(6)
BPS	Bypass of chroma base-band delay line 1=bypassed 0=active	19(6)
CB	Chroma bandpass centre frequency 1= 1.1x Fsc 0=Fsc	18(5)
ACL	Automatic colour limiting 1= active 0= not active	19(5)

CL2	CL1	CL0	Cathode Drive amplitude
0	0	0	57V
0	0	1	63V
0	1	0	70V
0	1	1	77V
1	0	0	84V
1	0	1	91V
1	1	0	99V
1	1	1	107V

No. 4E OP1

Item	-	AV input		COMB	B/G	I	D/K	M
KV-PG21P10	0	0	1	0	1	1	1	1

AV Input 00 = no AV Input model 01 = 1 AV Input model
10 = 2 AV Input model 11 = Not available

COMB (for NTSC model) 1 = Enable external comb filter, 0 =Disable external comb filter

Other optional function will be enabled if the corresponding bit is set to 1.

No. 4F OP2

Item	No NICAM	US ST	HDEV	1 V-Curve	XTAL SEL		SECAM	2nd Lang.
KV-PG21P10	0	0	0	0	1	1	1	1

No NICAM — 1 = NICAM search is disable in any TV system, 0 = NICAM search operates

US ST — (Reserved for NTSC model)

1 V-Curve (for monaural model) — 1 = using common volume curve for every mode and every TV system; 0 = another volume curve available for video mode and M system

XTAL SEL — 00 = only 4.43 XTAL; 01 = only 3.58 XTAL; 10 = not used; 11 = both 4.43 and 3.58 XTAL

Other optional function will be enabled if the corresponding bit is set to 1.

No. 50 OP3

Item	PIC Rot.	Auto TV Sys.	No Bal.	SPC SOUND	Korean ST	VM	H.K. Bil.	Thai Bil.
KV-PG21P10	0	0	0	0	0	0	0	0

No Bal. (for AV stereo model) — 1 = no balance in analog select items, 0 = balance included

SPC SOUND — 1 = Space Sound available, 0 = not available

Korean ST — (Reserved for NTSC model)

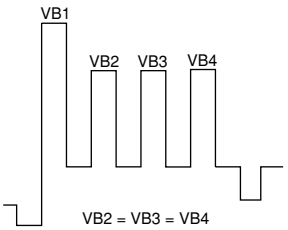
H.K. Bil. (for monaural model) — 1 = NICAM bilingual available (No NICAM stereo), 0 = not available

Other optional function will be enable if the corresponding bit is set to 1.

4-3. PICTURE QUALITY ADJUSTMENT

SUB COLOR ADJUSTMENT

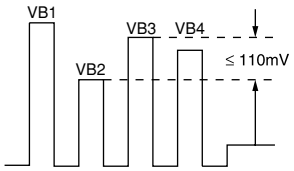
1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Set to Service Mode and select 13 'SC1' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust 13 'SC1' as step 2 to 5 when receiving NTSC color-bar.



VB2 = VB3 = VB4 (Difference is within 70mV)

SUB HUE ADJUSTMENT

1. Select Video.
2. Input a NTSC 3.58, color-bar into Video/TV mode.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN300, A board.
5. Select 11"SHU" with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



VB1 = VB2 = VB3 = VB4

The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.

6. Press [MUTING] → [0] of the commander to write the data.
7. Select TV channel with NTSC 3.58 and repeat 3 to 5.
8. Press [MUTING] → [0] of the commander to write the data.
9. Single system model with NTSC 4.43, select TV channel with NTSC 4.43 and repeat 3 to 5.

4-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service mode.
2. Input PAL color bar.
3. Using the [1] and [4] button, select category GEO (Service Mode).
4. Raise/lower the data using the [3] and [6] buttons.
   Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	CPN	CORNER PIN
	04	TLT	TLT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

NORMAL MODE (60Hz)

5. Input 525/60Hz signal.
6. Using the [1] and [4] buttons select category GEO (Service Mode).
7. Select and adjust the following items to obtain obtimum image.
   Raise/lower the data with the [3] and [6] buttons.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	CPN	CORNER PIN
	04	TLT	TILT
	05	VSL	V SLOPE
	06	VAP	VERTICAL AMPLITUDE
	07	SCO	S CORRECTION
	08	VPS	V SHIFT

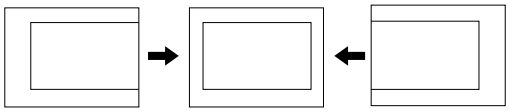
4-5. A BOARD AJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers 4E 'OP0', 4F 'OP1', 50 'OP2' and respectively set the bit per model with command buttons [3] and [6] .
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory. (This will also cancel Service Mode.)

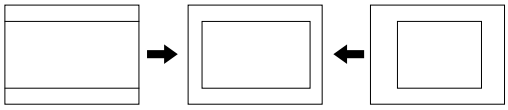
4-6. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

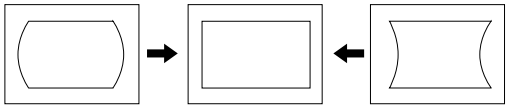
00 HPS (H POSITION)



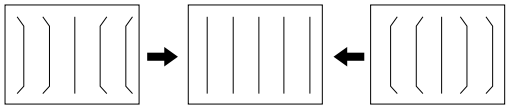
01 HSZ (H SIZE)



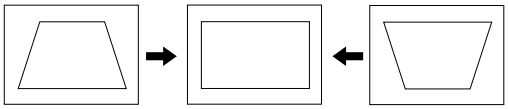
02 PAP (PIN AMPLITUDE)



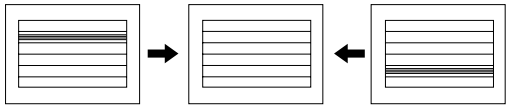
03 CPN (CORNER PIN)



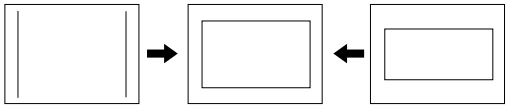
04 TLT (TILT)



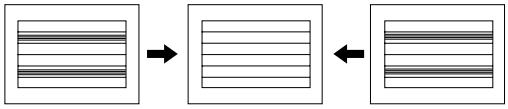
05 VSL (V SLOPE)



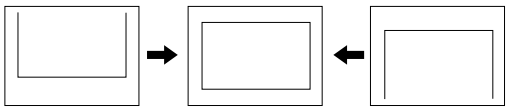
06 VAP (VERTICAL AMPLITUDE)



07 SCO (S CORRECTION)

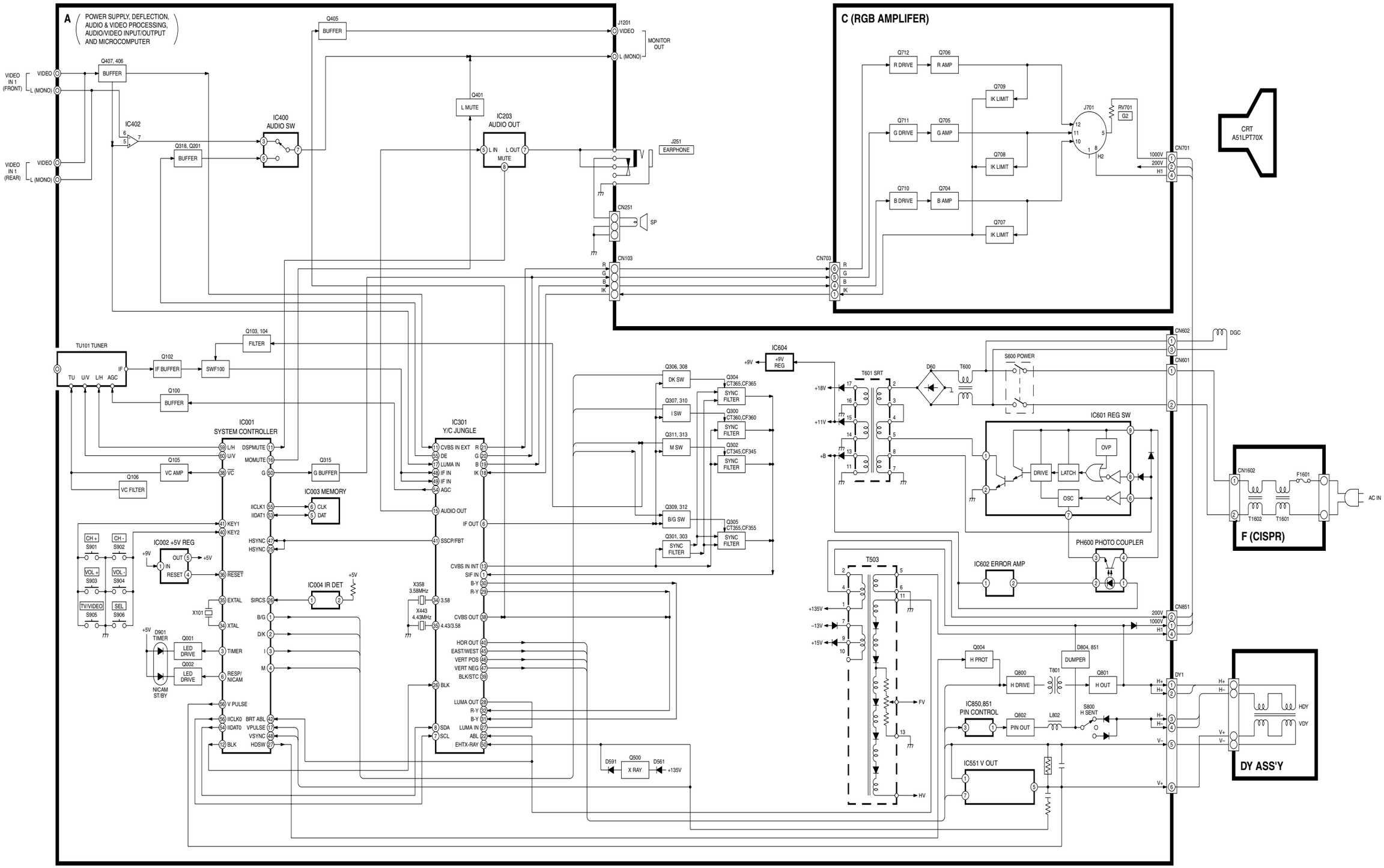


08 VPS (V SHIFT)



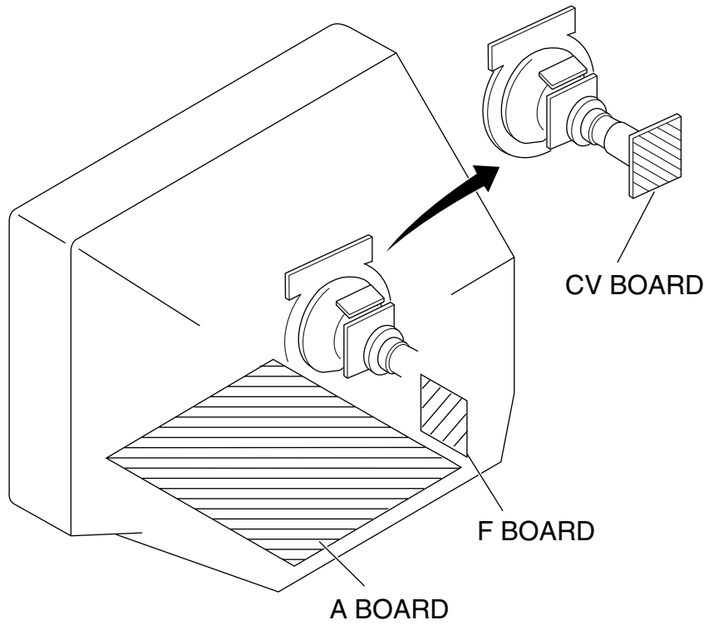
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



KV-PG21P10
RM-952

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

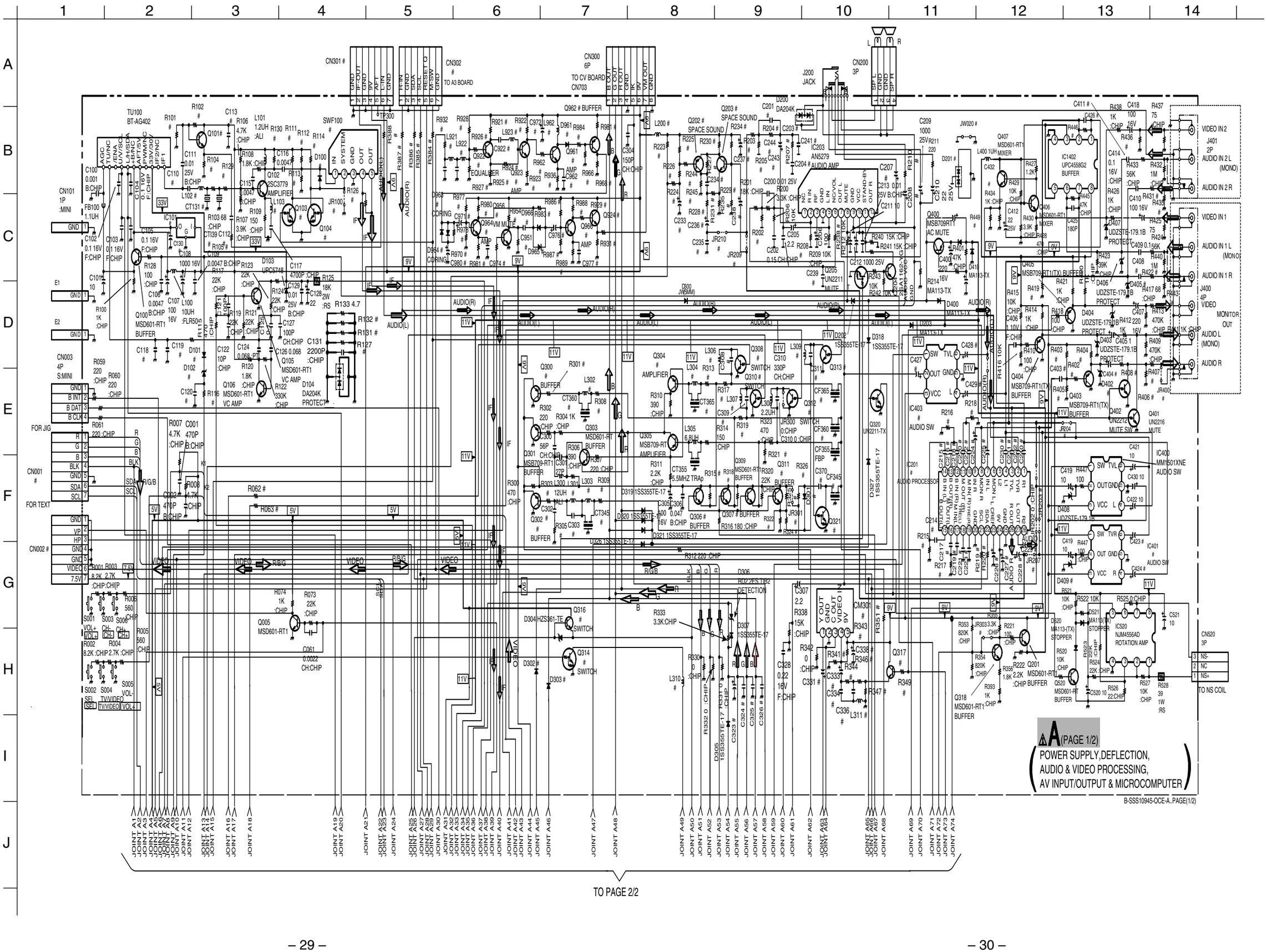
- : nonflammable resistor.
- △ : internal component.
- : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Redings are taken with a color-bar signal input.**
  no mark : COMMON
  ( ) : PAL
  [ ] : NTSC 3.58
- **Readings are taken with a 10 MΩ digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in Volt.**
- ✻ **: Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B +bus.**
- **: B –bus.**
- ⇨ **: signal path.**

Reference information

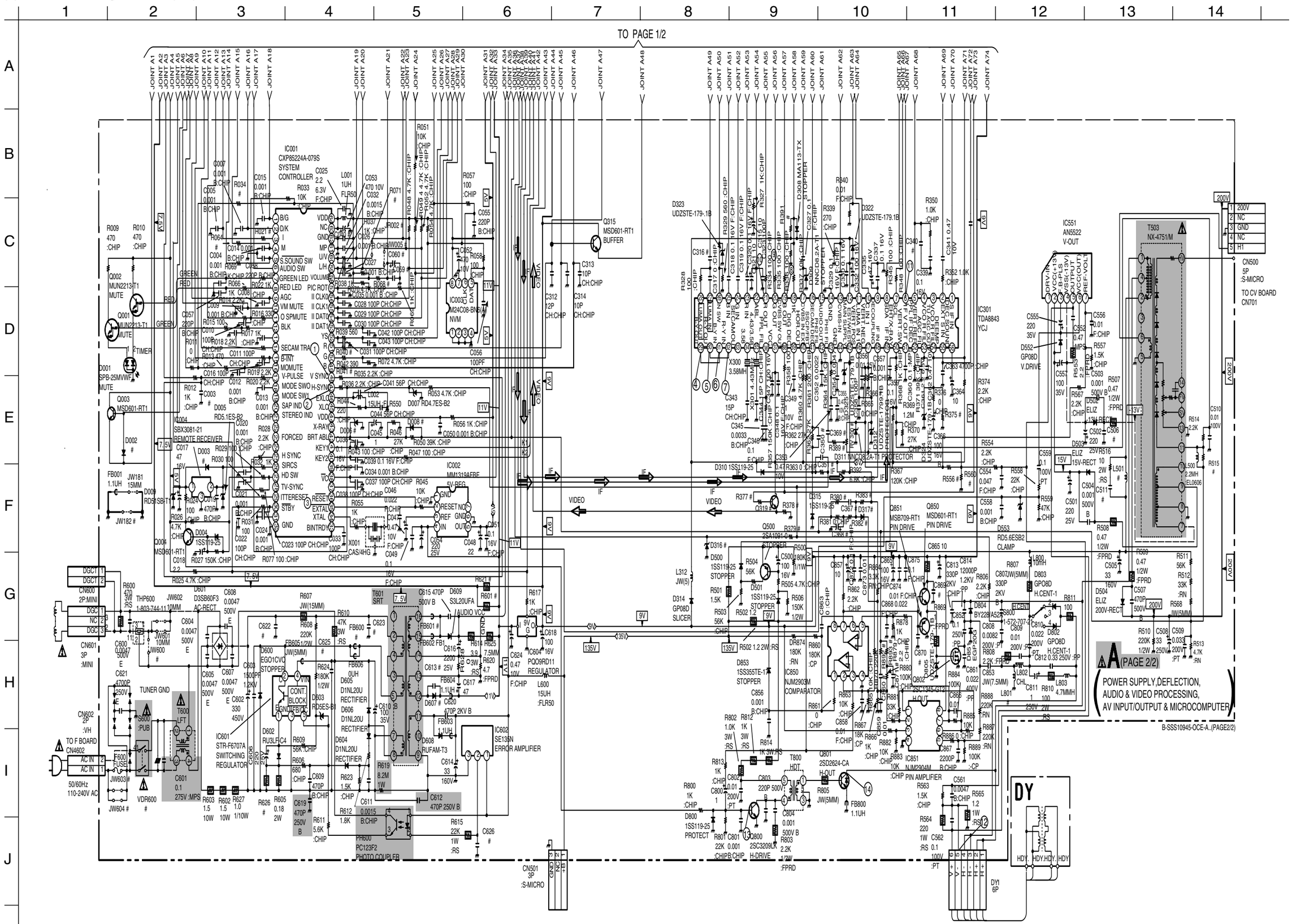
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

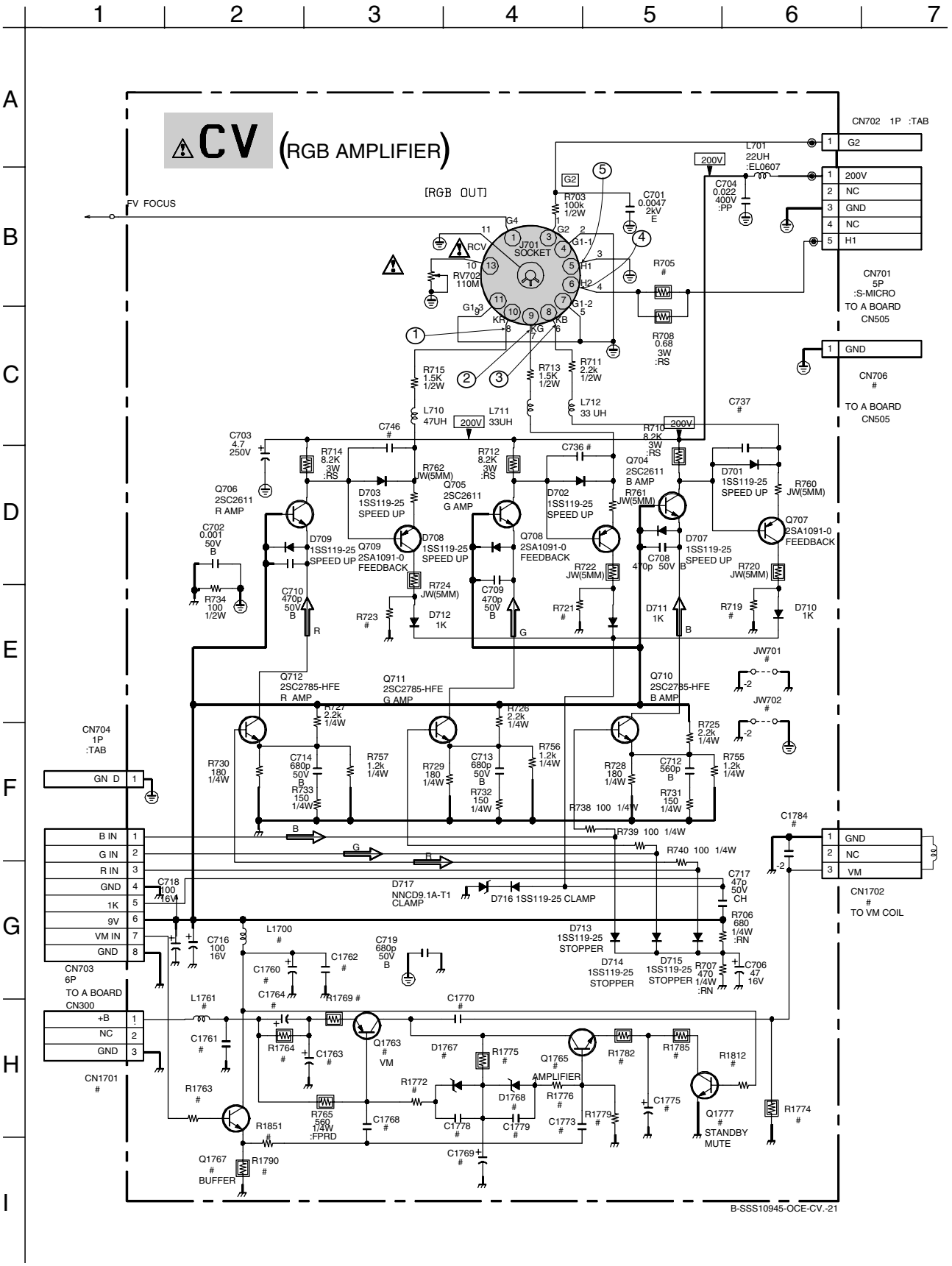
(1) Schematic Diagram of A (1/2) Board


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
CN301 # GND IF-OUT AGC 9V AFT LIN GND
CN302 # R-IN GND SDA SCL RESET O M-SW GND
TO A3 BOARD
CN300 6P
TO CV BOARD
CN703
B OUT G OUT R OUT GND IK 9V VM1 OUT GND
J200 JACK
CN200 3P
SP L GND GND SP R
TU100 BT-AG402
SWF100
IC101 CXA1870Q
IC201 AUDIO PROCESSOR
IC400 MM1501XNE AUDIO SW
IC401 AUDIO SW
IC1402 UPC4558G2 BUFFER
IC403 AUDIO SW
IC520 NJM4556AD ROTATION AMP
CN101 1P :MINI
CN003 4P S:MINI
CN001 #
CN002 #
FOR JIG
FOR TEXT
CN520 3P
TO NS COIL
VIDEO IN 2
J401 2P
AUDIO IN 2 L (MONO)
AUDIO IN 2 R
VIDEO IN 1
AUDIO IN 1 L (MONO)
AUDIO IN 1 R
J400 4P VIDEO MONITOR OUT
AUDIO L (MONO)
AUDIO R
AUDIO(L)
AUDIO(R)
VIDEO
R/B/G
SDA
SCL
JOINT A1 JOINT A2 JOINT A3 JOINT A4 JOINT A5 JOINT A6 JOINT A7 JOINT A8 JOINT A9 JOINT A10 JOINT A11 JOINT A12 JOINT A13 JOINT A14 JOINT A15 JOINT A16 JOINT A17 JOINT A18 JOINT A19 JOINT A20 JOINT A21 JOINT A22 JOINT A23 JOINT A24 JOINT A25 JOINT A26 JOINT A27 JOINT A28 JOINT A29 JOINT A30 JOINT A31 JOINT A32 JOINT A33 JOINT A34 JOINT A35 JOINT A36 JOINT A37 JOINT A38 JOINT A39 JOINT A40 JOINT A41 JOINT A42 JOINT A43 JOINT A44 JOINT A45 JOINT A46 JOINT A47 JOINT A48 JOINT A49 JOINT A50 JOINT A51 JOINT A52 JOINT A53 JOINT A54 JOINT A55 JOINT A56 JOINT A57 JOINT A58 JOINT A59 JOINT A60 JOINT A61 JOINT A62 JOINT A63 JOINT A64 JOINT A65 JOINT A66 JOINT A67 JOINT A68 JOINT A69 JOINT A70 JOINT A71 JOINT A72 JOINT A73 JOINT A74
TO PAGE 2/2
A (PAGE 1/2)
POWER SUPPLY,DEFLECTION,
AUDIO & VIDEO PROCESSING,
AV INPUT/OUTPUT & MICROCOMPUTER
B-SSS10945-OCE-A..PAGE(1/2)

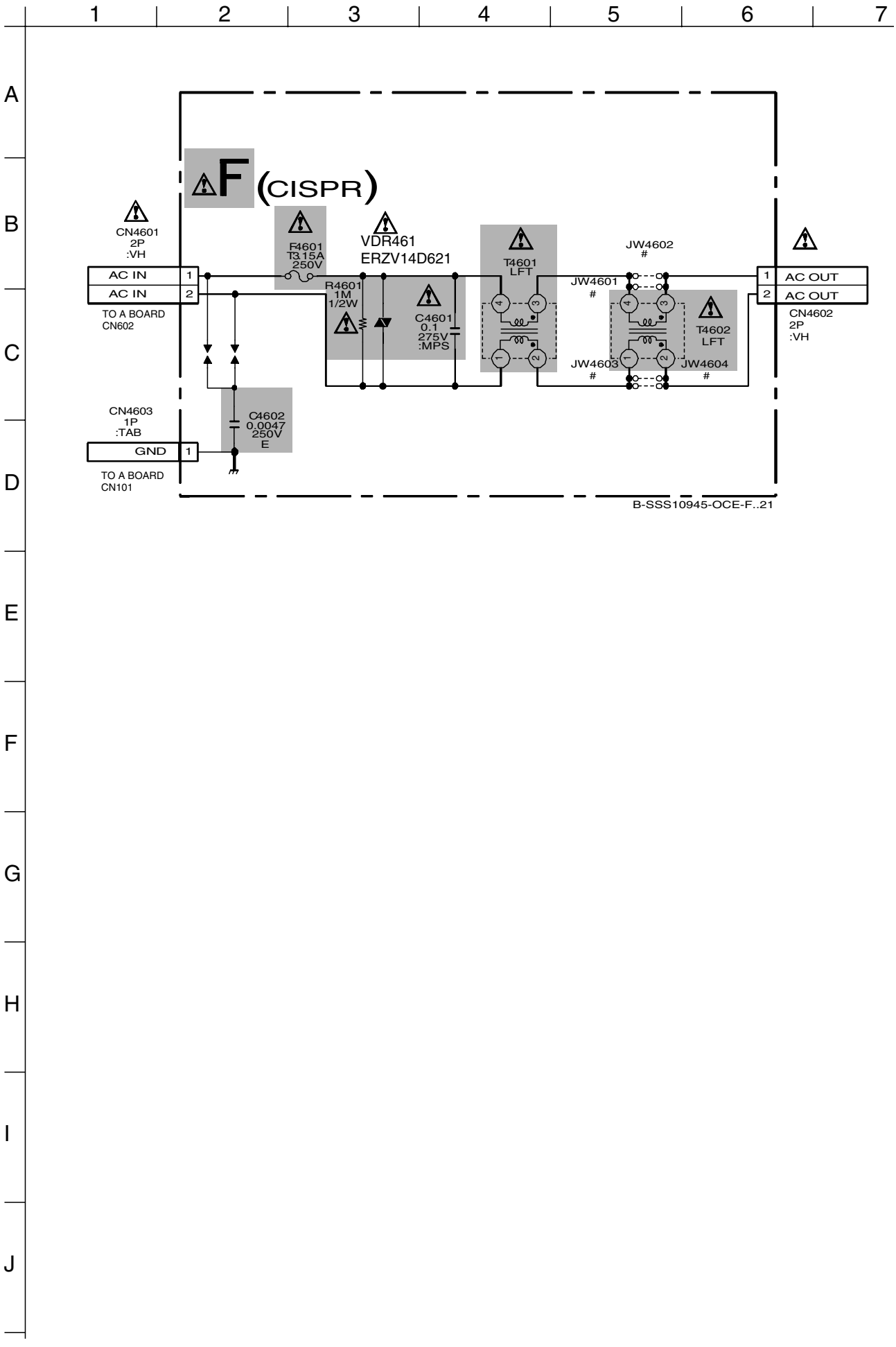
(2) Schematic Diagram of A (2/2) Board


TO PAGE 1/2
IC001
CXP85224A-079S
SYSTEM
CONTROLLER
IC002
MM1319AFRE
5V-REG
IC003
M24C08-BN6
NVM
IC004
SBX3081-21
REMOTE RECEIVER
IC301
TDA8843
YCJ
IC551
AN5522
V-OUT
IC601
STR-F6707A
SWITCHING
REGULATOR
IC602
SE135N
ERROR AMPLIFIER
IC850
NJM2903M
COMPARATOR
IC851
NJM2904M
PIN AMPLIFIER
Q315
MSD601-RT1
BUFFER
Q319
Q500
2SA1091-O
STOPPER
Q800
2SC3209LK
H-DRIVE
Q801
2SD2624-CA
H-OUT
Q802
2SC1345-GT2
H-OUT
Q850
MSD601-RT1
PIN DRIVE
Q851
MSB709-RT1
PIN DRIVE
T503
NX-4751/M
T600
LFT
T601
SRT
PH600
PC123F2
PHOTO COUPLER
D323
UDZSTE-179-18
D322
UDZSTE-179.1B
D308
MA113-TX
STOPPER
D310
1SS119-25
D311
NNCD8.2A-TH
PROTECTOR
D315
1SS119-25
D316
1SS119-25
STOPPER
D500
1SS119-25
STOPPER
D501
1SS119-25
STOPPER
D552
GP08D
V.DRIVE
D553
RD5.6ESB2
CLAMP
D800
1SS119-25
PROTECT
D850
1SS355TE-17
STOPPER
D852
EGP20D
D853
1SS355TE-17
STOPPER
D854
EGP20D
D855
UDZSTE-179.1B
D856
UDZSTE-179.1B
D857
UDZSTE-179.1B
D858
UDZSTE-179.1B
D859
UDZSTE-179.1B
D860
UDZSTE-179.1B
D861
UDZSTE-179.1B
D862
UDZSTE-179.1B
D863
UDZSTE-179.1B
D864
UDZSTE-179.1B
D865
UDZSTE-179.1B
D866
UDZSTE-179.1B
D867
UDZSTE-179.1B
D868
UDZSTE-179.1B
D869
UDZSTE-179.1B
D870
UDZSTE-179.1B
D871
UDZSTE-179.1B
D872
UDZSTE-179.1B
D873
UDZSTE-179.1B
D874
UDZSTE-179.1B

(3) Schematic Diagram of CV Board



(4) Schematic Diagram of F Board



5-4. VOLTAGE MEASUREMENT

A(1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC001	1	4.9
	2	0
	3	0
	4	0
	5	4.9
	6	(0) [4.8]
	7	0
	8	0
	9	4.9
	10	4.8
	11	0
	12	0
	13	0
	14	4.8
	15	4.9
	16	0
	17	0
	18	0
	19	(0.3) [0]
	20	0
	21	0
	22	0
	23	0
	24	0
	25	0.3
	26	4.0
	27	0
	28	0
	29	0
	30	4.9
	31	4.9
	32	0
	33	(0) [4.9]
	34	(0) [2.3]
	35	2.2
	36	4.9
	37	0
	38	(3.2) [4.8]
	39	0
	40	4.9
	41	4.9
	42	0
	43	0.3
	44	4.9
	45	4.9
	46	4.9
	47	(0.3) [0]
	48	0
	49	0
	50	0
	51	0
	52	0
	53	4.9
	54	4.8
	55	4.9
	56	4.8
	57	4.9
	58	(1.9) [2.1]
	59	8.8
	60	(0.2) [8.8]
	61	0
	62	0
	63	4.9
	64	4.9
IC002	1	0
	2	(4.9) [0]
	3	(4.8) [0]
	4	(15.5) [0]
	5	(4.9) [0]
	6	0
	7	0
IC003	1	0
	2	0
	3	0
	4	0
	5	(4.9) [0]
	6	(4.9) [0]
	7	0
	8	(4.9) [1.0]
IC004	1	4.8
	2	3.9
	3	0
IC101	I	*
	G	*
	O	*
IC203	1	0
	2	0
	3	15.6
	4	0
	5	0
	6	0
	7	7.4
	8	1.0
	9	0
	10	(16.7) [0]
	11	(8.3) [16.7]
	12	(0) [8.3]
IC400	1	0
	2	4.4
	3	8.9
	4	0
	5	0
	6	5.1
IC1401	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
IC520	1	0
	2	0
	3	0
	4	0
	5	0
	6	0
	7	0
	8	15.5
IC601	1	0.8
	2	(0.4) [1.3]
	3	(157) [171]
	4	11.0
	5	0
IC602	1	115
	2	(135) [0.01]
	3	(0) [135]
IC604	1	(0) [15.5]
	2	8.9
	3	0
	4	4.9
IC850	1	0.8
	2	0.8
	3	1.5
	4	0
	5	2.6
	6	1.6
	7	7.4
	8	8.9
PH600	1	134
	2	133
	3	3.6
	4	17.5
IC301	1	0.4
	2	3.7
	3	0
	4	0
	5	2.4
	6	(3.0) [1.5]
	7	4.8
	8	4.8
	9	6.6
	10	1.1
	11	3.4
	12	8.1
	13	(3.8) [3.3]
	14	0
	15	3
	16	0
	17	3.8
	18	7.6
	19	2.4
	20	2.3
	21	2.6
	22	0
	23	(0) [3.4]
	24	0
	25	0
	26	0
	27	2.7
	28	2.7
	29	2.3
	30	2.3
	31	2.3
	32	2.3
	33	0.3
	34	2.4
	35	2.4
	36	4.8
	37	8.1
	38	2.4
	39	4.9
	40	1.5
	41	0.6
	42	2.9
	43	(3.9) [4.4]
	44	0
	45	(3.1) [2.5]
	46	1.3
	47	1.4
	48	4.6
	49	4.6
	50	1.5
	51	3.6
	52	3.8
	53	(4.4) [5.7]
	54	(3.8) [0.2]
	55	(2.9) [0]
	56	3.4
IC551	1	0.5
	2	13.3
	3	(12.1) [0]

A(2/2) BOARD VOLTAGE LIST

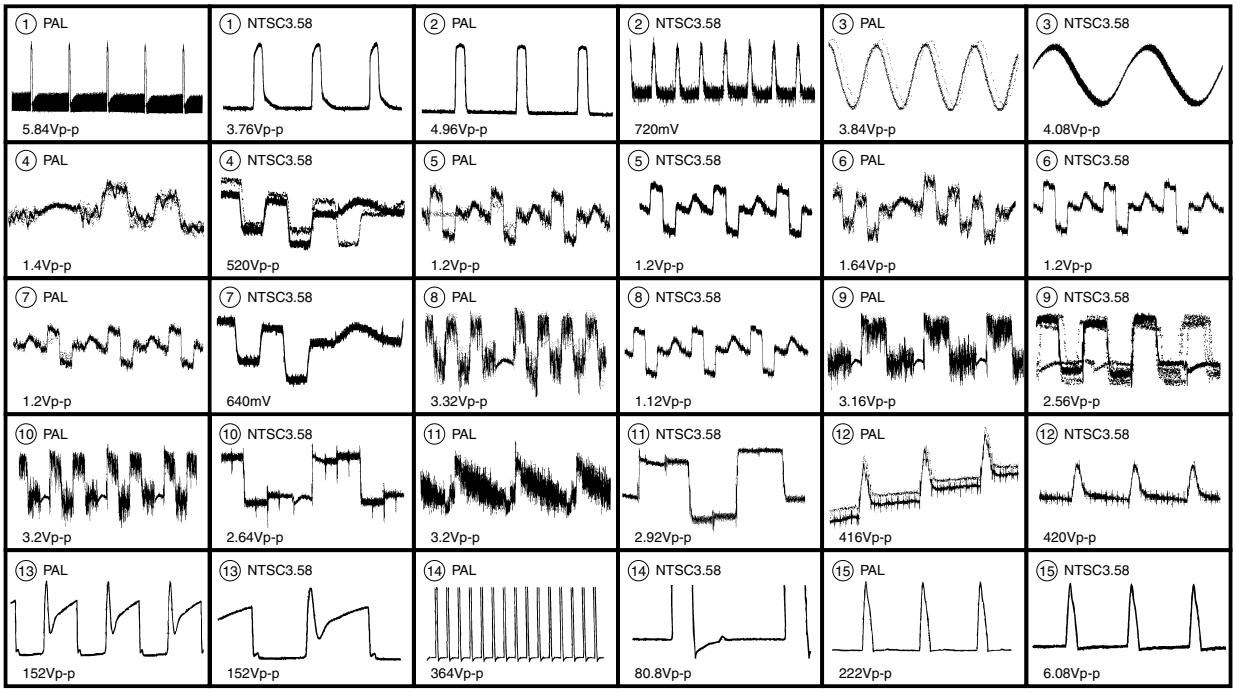
Ref	Pin No	Voltage[v]
	4	13.3
	5	(1.2) [0.3]
	6	13.5
	7	0.5
SWF100	1	0
	2	0
	3	0
	4	4.7
	5	4.7
Q001	B	0
	C	4.9
	E	0
Q002	B	0
	C	4.9
	E	0
Q003	B	*
	C	*
	E	*
Q004	B	0.1
	C	4.9
	E	0.1
Q100	B	(8.1) [0.2]
	C	8.9
	E	(7.5) [0]
Q101	B	*
	C	*
	E	*
Q102	B	3.7
	C	8.9
	E	3.1
Q103	B	*
	C	*
	E	*
Q104	B	*
	C	*
	E	*
Q105	B	0.6
	C	(6.6) [0]
	E	0
Q106	B	0.6
	C	4.1
	E	0
Q200	B	0
	C	0
	E	0
Q201	B	6
	C	8.9
	E	5.3
Q202	B	0
	C	0
	E	0
Q203	B	0
	C	0
	E	0
Q300	B	*
	C	*
	E	*
Q302	B	*
	C	*
	E	*
Q303	B	*
	C	*
	E	*
Q304	B	*
	C	*
	E	*
Q307	B	(2.9) [1.5]
	C	8.9
	E	(2.3) [0.9]
Q308	B	*
	C	*
	E	*
Q309	B	2.9
	C	0
	E	0
Q310	B	*
	C	*
	E	*
Q313	B	*
	C	*
	E	*
Q314	B	4
	C	0
	E	0
Q315	B	0
	C	8.9
	E	2.2
Q316	B	0
	C	0
	E	0
Q318	B	2.9
	C	6
	E	2.4
Q319	B	0
	C	8.1
	E	0
Q400	B	15.5
	C	0
	E	15.5
Q401	B	0
	C	0
	E	0
Q402	B	0
	C	0
	E	0
Q403	B	0.3
	C	0
	E	0
Q404	B	4.5
	C	0
	E	5.2
Q405	B	2.4
	C	8.9
	E	1.8
Q406	B	2.4
	C	(4.1) [5.0]
	E	1.8
Q407	B	5.0
	C	8.9
	E	4.3
Q408	B	3.5
	C	8.9
	E	2.9
Q409	B	0
	C	0
	E	0
Q500	B	133.5
	C	0
	E	133.5
Q800	B	0.1
	C	51.6
	E	0
Q801	B	0
	C	0
	E	0
Q802	B	(6.0) [-94.3]
	C	7
	E	0
Q850	B	7.4
	C	8.9
	E	7.0
Q851	B	7.4
	C	0
	E	7.0
Q852	B	6.7
	C	8.9
	E	6.1
Q853	B	0.3
	C	6.9
	E	0
Q854	B	0.9
	C	0.8
	E	0
Q922	B	*
	C	*
	E	*
Q923	B	*
	C	*
	E	*
Q924	B	*
	C	*
	E	*
Q954	B	*
	C	*
	E	*
Q956	B	*
	C	*
	E	*
Q961	B	*
	C	*
	E	*
Q962	B	*
	C	*
	E	*
Q966	B	*
	C	*
	E	*

CV BOARD VOLTAGE LIST

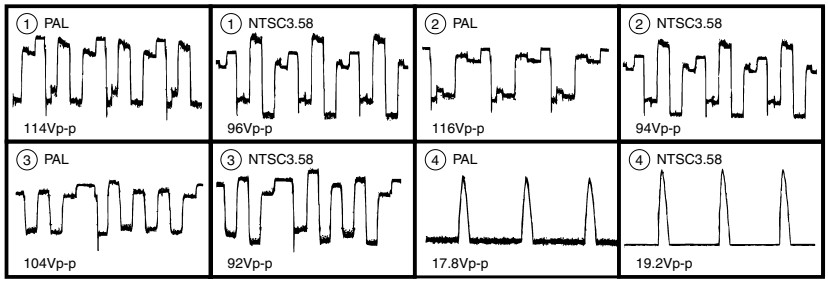
Ref	Pin No	Voltage[v]
J701	G2	(135) [142]
	G1-1	0
	H1	0
	H2	0
	G1-2	0
	KB	133
	KG	(125) [145]
	KR	129
	G1-3	0
	E	0
Q705	B	8.9
	C	(144) [148]
	E	8.3
Q704	B	8.9
	C	137
	E	8.3
Q706	B	8.9
	C	(128) [132]
	E	8.3
Q707	B	136
	C	7.6
	E	132
Q708	B	(143) [146]
	C	7.0
	E	144
Q709	B	(127) [131]
	C	7.0
	E	128
Q710	B	2.5
	C	8.3
	E	1.8
Q711	B	2.3
	C	8.3
	E	1.6
Q712	B	2.6
	C	8.3
	E	1.9
Q1763	B	0
	C	0
	E	0
Q1765	B	0
	C	0
	E	0
Q1767	B	0
	C	0
	E	0
Q1777	B	0
	C	0
	E	0

5-5. WAVEFORMS

A BOARD WAVEFORM



CV BOARD WAVEFORM

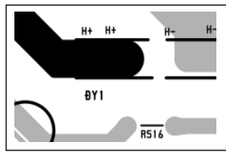


KV-PG21P10
RM-952

5-6. PRINTED WIRING BOARDS AND PARTS LOCATION

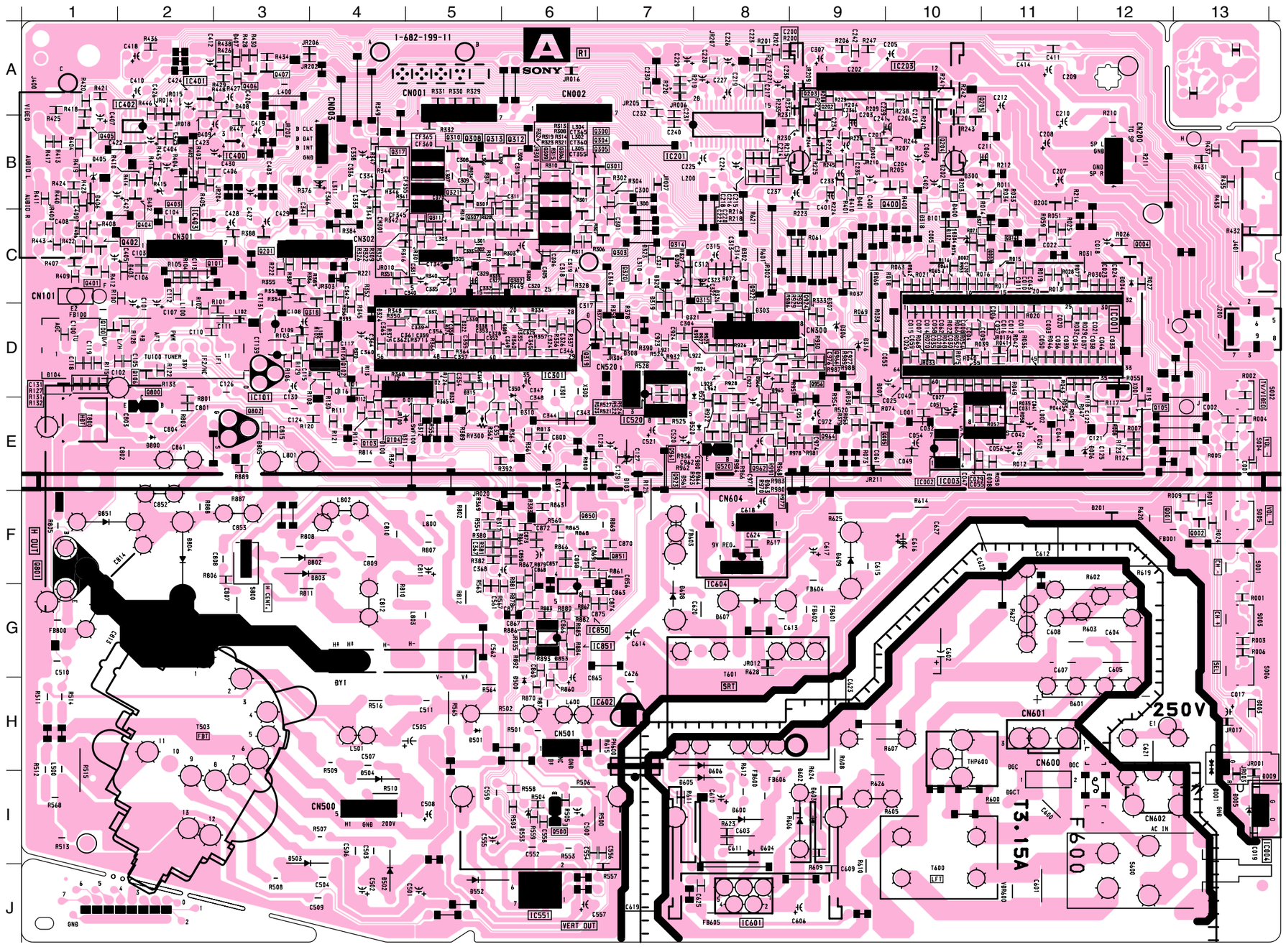
PRINTED WIRING BOARDS

A [POWER SUPPLY,DEFLECTION,
AUDIO AND VIDEO PROCESSING,
AUDIO/VIDEO INPUT/OUTPUT AND MICROCOMPUTER]



NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

– A Board –



A BOARD

IC

IC001	D-12
IC002	E10
IC003	E10
IC004	I-13
IC100	D-3
IC201	B-7
IC203	A-10
IC301	D-6
IC400	B-3
IC401	A-2
IC402	A-2
IC403	C-2
IC520	E-7
IC551	J-6
IC601	J-8
IC602	H-6
IC604	G-8
IC850	G-6
IC851	G-6
PH600	H-7

TRANSISTOR

Q001	F-12
Q002	F-13
Q003	C-11
Q004	C-12
Q005	E-9
Q100	D-1
Q101	C-2
Q102	D-4
Q103	E-4
Q104	E-4
Q105	E-12
Q106	D-2
Q201	C-3
Q202	A-9
Q203	A-9
Q204	B-10
Q205	A-10
Q300	B-6
Q301	B-7
Q302	C-6
Q303	C-7
Q304	B-6
Q305	B-6
Q306	B-6
Q307	C-5
Q308	B-5
Q309	B-6
Q310	B-5
Q311	C-5
Q312	B-6
Q313	B-5
Q314	C-7
Q315	C-8
Q316	C-11
Q317	B-4
Q318	D-4
Q319	D-6
Q320	C-7
Q321	B-5
Q400	B-10
Q401	C-1
Q402	C-2
Q403	B-2
Q404	C-2
Q405	B-1
Q406	A-3
Q407	A-3
Q500	I-6
Q520	E-8
Q800	D-2
Q801	F-1
Q802	E-3
Q850	F-6
Q851	F-7
Q922	C-8
Q923	E-7
Q924	C-9
Q956	D-9
Q961	E-7
Q962	E-8
Q964	E-9

DIODE

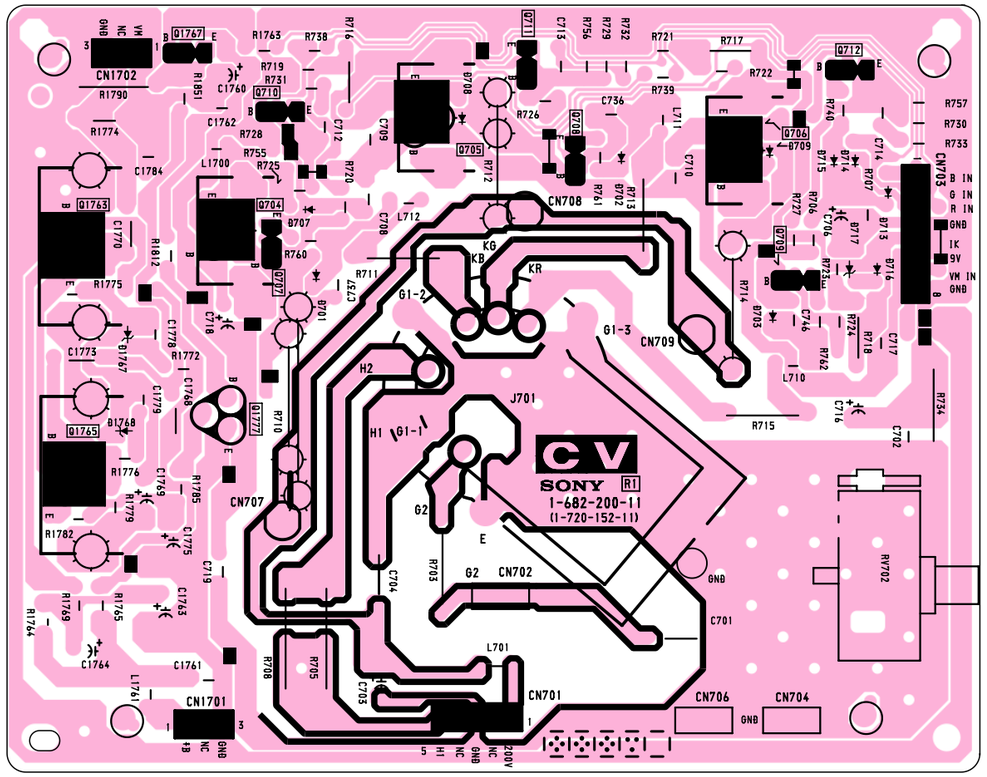
D001	I-13
D002	C-10
D003	H-13
D004	D-12
D005	I-13
D006	E-12
D007	D-9
D008	E-11
D009	I-13
D100	E-4
D101	C-10
D102	C-10
D103	E-7
D104	D-1
D200	B-11
D201	F-12
D202	B-10
D203	B-10
D300	B-10
D301	B-5
D302	C-8
D303	D-8
D304	C-10
D305	C-7
D306	D-9
D308	D-7
D309	D-6
D310	E-6
D311	E-4
D312	E-5
D314	E-6
D315	D-5
D316	D-9
D317	F-5
D318	C-10
D319	C-7
D320	C-7
D321	D-7
D323	C-7
D324	D-4
D325	D-5
D326	C-8
D327	C-10
D400	B-10
D401	B-9
D402	B-2
D403	C-2
D404	B-1
D405	B-1
D406	B-1
D407	A-3
D408	A-3
D409	B-2
D410	B-9
D500	H-6
D501	H-5
D502	J-4
D503	I-3
D504	I-4
D520	E-8
D521	D-8
D552	J-5
D553	I-6
D600	I-8
D601	H-11
D601	I-9
D602	I-9
D604	I-8
D605	I-7
D606	I-8
D607	G-8
D608	G-7
D609	F-9
D800	E-2
D802	F-4
D803	F-4
D804	F-2
D805	E-3
D851	F-1
D853	G-6
D961	E-7
D965	D-8
D966	D-8

KV-PG21P10
RM-952

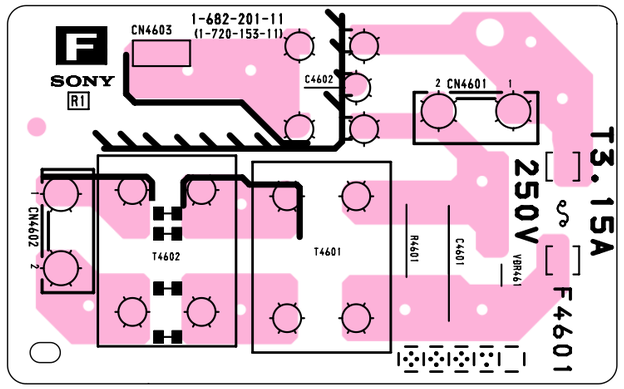
PRINTED WIRING BOARDS

CV [RGB AMPLIFER] **F** [CISPR]

– CV Board –

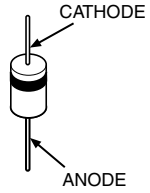
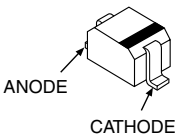
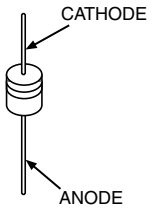
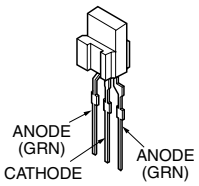
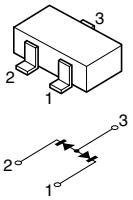


– F Board –

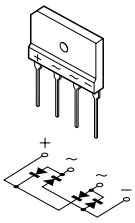
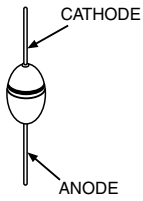
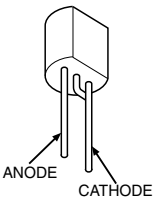
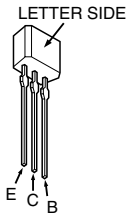
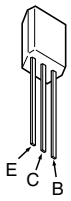
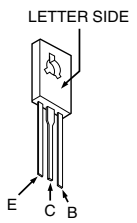


5-7. SEMICONDUCTORS

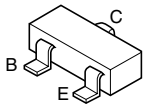
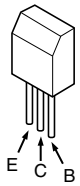
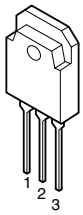
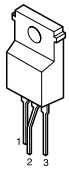
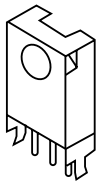
DIODE

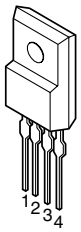
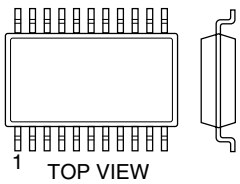
					
D1NL20U ELIZ EG01CV1 GPO8D EGP20G	NNCD8.2A-T1 NNCD9.1A-T1 RU4AM-T3 1SS119-25 RU3LF-CA NNCD8.2A-T1	MA113-(TX) RD5.6ESB2 RD9.1S-B UDZSTE-179.1B 1SS355TE-77	RD4.7ESB2 RD2.2ES-B2 RD5.1ESB2 RD15ES-T1B S3L20UF4 RD2.2SB-T1	SPB-26MVWF	DA204K

TRANSISTOR

					
D3SB60F3 D4SB60L	BY228	UPC574J	2SC2785-HFE 2SC2410SN	2SA1091-0 2SC1345-ET2	2SC2611

IC

					
2SB709A-QRS-TX MSD601-RT1 MSB709-RT1 UN2211 UN2213	UN2216 2SD601A-Q 2SA1162-9 2SA1037AK-T146	2SC3209LK	2SD2624-CA	SE-135N	SBX3081-21

DIP TOP VIEW Dual In-line Package Pin 6~98		SOP  TOP VIEW Small Outline L-Leaded Pin 8~98
M24C08-BN6 (A)(8 PIN) M5216P NJM4S56AD CXP85224A-079S(64 PIN) TDA8843	PQ09RE11 PQO9RD11	MM1319AFBE BA4558F CXP85224A UPC455892 NJM2903M NJM2904M

SECTION 6
EXPLODED VIEWS

NOTE:

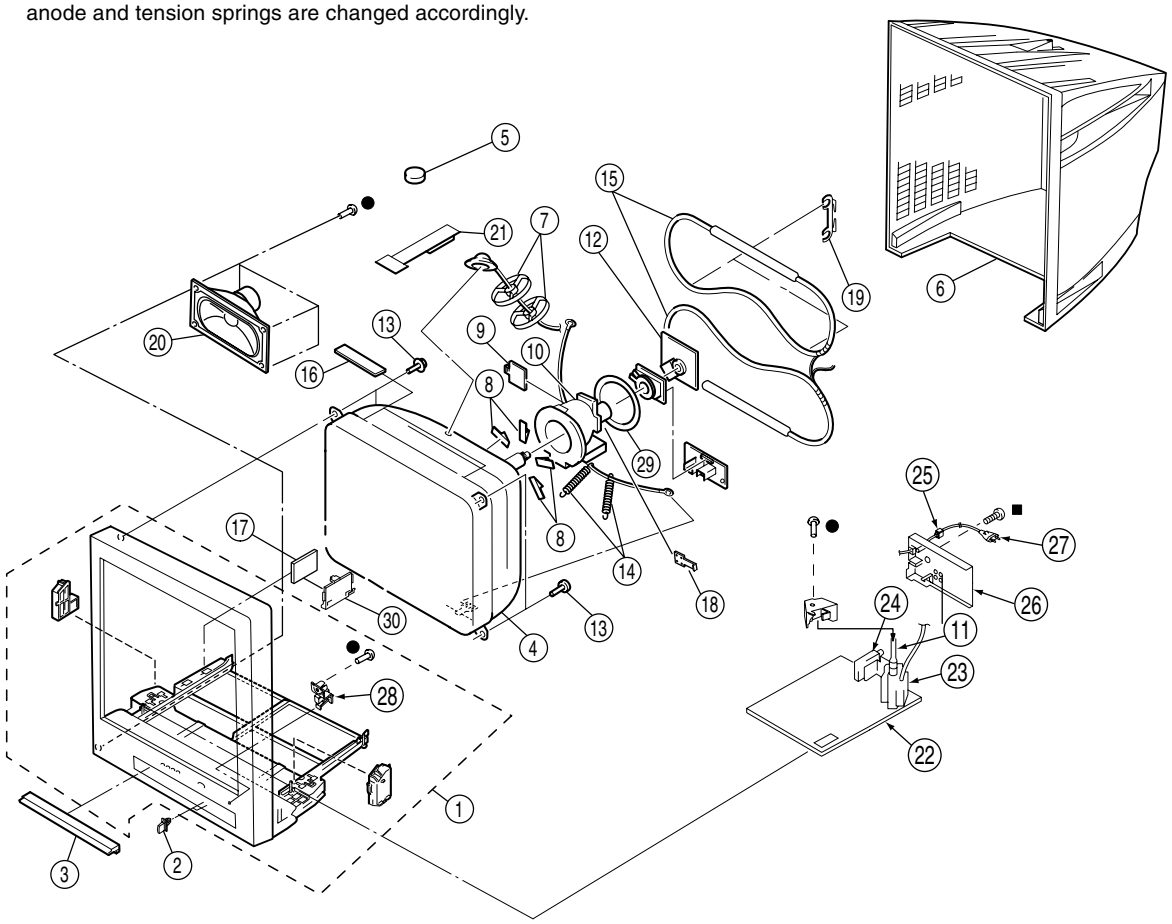
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. PICTURE TUBE AND CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16

Caution : Do not take out CRT Support block while TV set in standing position.
NOTE : The picture tube for OCE model is upside down, and the position for the anode and tension springs are changed accordingly.



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4039-125-1	BEZNET ASSY	28
2		4-081-868-01	BUTTON POWER	
3		X-4039-301-1	DOOR ASSY, CONTROL	
4	⚠	8-738-809-05	PICTURE TUBE (A51LPT70X)	
5		1-452-032-00	MAGNET DISC	
6		4-081-866-01	COVER REAR (■ 7 SCREWS)	
7		3-704-372-11	HOLDER HV CABLE	
8		4-046-600-11	SPACER DY	
9		4-057-714-01	PIECE TLH CONVERGENCE	
10	⚠	8-451-505-11	DEFLECTION YOKE (Y21RSA-S)	
11		1-900-212-58	LEAD ASSY FOCUS	
12	*	A-1332-200-A	CV BOARD MOUNTED	
13		4-365-808-01	SCREW (5) TAPPING	
14		4-078-765-01	SPRING EXTENSION	
15	⚠	1-419-479-11	COIL DEGAUSSING	

REF. NO.		PART NO.	DESCRIPTION	REMARK
16		4-069-652-02	CUSHION (HS BAND)	
17	*	A-1241-499-A	F BOARD MOUNTED	
18		4-034-272-11	PLATE CORRECTION TLV	
19		4-061-883-03	HOLDER DGC	
20		1-505-547-21	SPEAKER (5 x 9CM) (● 4 SCREWS)	
21		4-051-736-42	PIECE (90) CONV, CORRECT	
22	*	A-1299-544-A	A BOARD COMPLETE	
23	⚠	1-453-329-31	TRANSFORMER ASSY FLYBACK (NX-4751/M3A4)	
24		8-598-591-00	TUNER BT-AG402	
25		4-022-115-00	HOLDER AC CORD	
26		4-059-710-01	BRACKET TERMINAL BOARD (■ 1 SCREW)	
27		1-574-358-11	CORD POWER WITH CONNECTOR 7.5A/250V	
28	*	4-081-867-01	BAR OPTICAL	
29		1-452-728-41	COIL, NA ROTATION (CRT-154)	
30	*	4-049-158-02	BRACKET, F1 PC BOARD	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

REF NO.	PART NO.	DESCRIPTION	REMARK
*	A-1299-544-A	A BOARD COMPLETE	
		**********	
	1-900-703-21	CONNECTOR ASSY, 3P	
*	4-055-304-01	HOLDER, LED	
	4-082-405-01	HOLDER, FBT	
	4-085-174-01	PLATE, HEAT SINK	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
	4-382-854-21	SCREW (M3X14), P, SW (+)	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
		<CAPACITOR>	

REF NO.	PART NO.	DESCRIPTION			
C001	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C002	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C004	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C005	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C006	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C007	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C009	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C010	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C011	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C012	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C013	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C014	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C015	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C016	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C017	1-126-947-11	ELECT	47UF	20.00%	16V
C018	1-126-961-11	ELECT	2.2UF	20.00%	50V
C019	1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C020	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C021	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C022	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C023	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C024	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C025	1-135-834-91	CERAMIC CHIP	2.2E+06PF		6.3V
C026	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C027	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C028	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C029	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C030	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C031	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C032	1-162-965-11	CERAMIC CHIP	0.0015UF	10.00%	50V
C033	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C034	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C035	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C036	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C037	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C038	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C039	1-163-038-91	CERAMIC CHIP	0.1UF		25V

REF NO.	PART NO.	DESCRIPTION			
C041	1-162-924-11	CERAMIC CHIP	56PF	5.00%	50V
C042	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C043	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C044	1-162-924-11	CERAMIC CHIP	56PF	5.00%	50V
C045	1-126-962-11	ELECT	3.3UF	20.00%	50V
C046	1-162-995-11	CERAMIC CHIP	0.022UF		50V
C047	1-113-619-11	CERAMIC CHIP	0.47UF		10V
C048	1-126-965-91	ELECT	22UF	20.00%	50V
C049	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C050	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C051	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C052	1-126-935-11	ELECT	470UF	20.00%	10V
C053	1-126-935-11	ELECT	470UF	20.00%	10V
C054	1-104-666-11	ELECT	220UF	20.00%	25V
C055	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C056	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C057	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C058	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C061	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C063	1-102-852-91	CERAMIC	47PF	5.00%	50V
C100	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C101	1-126-964-11	ELECT	10UF	20.00%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C103	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C104	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C105	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C106	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C107	1-126-933-11	ELECT	100UF	20.00%	16V
C108	1-126-767-11	ELECT	1000UF	20.00%	16V
C109	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C111	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C115	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C116	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C117	1-162-924-11	CERAMIC CHIP	56PF	5.00%	50V
C121	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C122	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C124	1-130-493-00	MYLAR	0.068UF	5.00%	50V
C125	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C126	1-130-493-00	MYLAR	0.068UF	5.00%	50V
C127	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C128	1-126-965-91	ELECT	22UF	20.00%	50V
C129	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C131	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C200	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C202	1-136-167-00	FILM	0.15UF	5.00%	50V
C205	1-126-961-11	ELECT	2.2UF	20.00%	50V
C206	1-126-968-11	ELECT	100UF	20.00%	50V
C209	1-126-942-61	ELECT	1000UF	20.00%	25V
C210	1-128-551-11	ELECT	22UF	20.00%	25V
C211	1-126-964-11	ELECT	10UF	20.00%	50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION		REMARK	
C212	1-126-942-61	ELECT	1000UF	20.00%	25V
C213	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C242	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C300	1-162-924-11	CERAMIC CHIP	56PF	5.00%	50V
C301	1-162-920-11	CERAMIC CHIP	27PF	5.00%	50V
C304	1-119-662-91	CERAMIC CHIP	150PF	1.00%	50V
C305	1-126-933-11	ELECT	100UF	20.00%	16V
C306	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C307	1-126-957-11	ELECT	0.22UF	20.00%	50V
C310	1-216-295-91	SHORT	0		
C312	1-162-916-11	CERAMIC CHIP	12PF	5.00%	50V
C315	1-126-961-11	ELECT	2.2UF	20.00%	50V
C317	1-216-295-91	SHORT	0		
C318	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C319	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C320	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C321	1-126-963-11	ELECT	4.7UF	20.00%	50V
C323	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C327	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C328	1-164-222-91	CERAMIC CHIP	0.22UF		25V
C329	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C330	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C332	1-126-933-11	ELECT	100UF	20.00%	16V
C335	1-126-947-11	ELECT	47UF	20.00%	16V
C337	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C339	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C341	1-113-619-11	CERAMIC CHIP	0.47UF		10V
C342	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C343	1-162-917-11	CERAMIC CHIP	15PF	5.00%	50V
C344	1-162-917-11	CERAMIC CHIP	15PF	5.00%	50V
C345	1-162-967-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C346	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C347	1-126-933-11	ELECT	100UF	20.00%	16V
C348	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C349	1-164-346-11	CERAMIC CHIP	1UF		16V
C352	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C353	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C354	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C355	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C356	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C357	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C358	1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C359	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C360	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C361	1-135-834-91	CERAMIC CHIP	2.2E+06PF		6.3V
C362	1-113-619-11	CERAMIC CHIP	0.47UF		10V
C363	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C364	1-126-964-11	ELECT	10UF	20.00%	50V
C366	1-126-933-11	ELECT	100UF	20.00%	16V
C368	8-719-110-37	RD13ES-B3			
C400	1-126-934-11	ELECT	220UF	20.00%	16V
C405	1-126-960-11	ELECT	1UF	20.00%	50V
C406	1-115-156-11	CERAMIC CHIP	1UF		10V
C407	1-126-934-11	ELECT	220UF	20.00%	16V
C409	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C410	1-126-933-11	ELECT	100UF	20.00%	16V
C412	1-128-551-11	ELECT	22UF	20.00%	25V
C414	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C418	1-126-933-11	ELECT	100UF	20.00%	16V
C419	1-126-964-11	ELECT	10UF	20.00%	50V

REF NO.		PART NO.	DESCRIPTION		REMARK	
C421		1-126-964-11	ELECT	10UF	20.00%	50V
C422		1-126-964-11	ELECT	10UF	20.00%	50V
C425		1-162-927-11	CERAMIC CHIP	100PF	5.00%	50V
C430		1-126-964-11	ELECT	10UF	20.00%	50V
C500		1-126-933-11	ELECT	100UF	20.00%	16V
C501		1-104-666-11	ELECT	220UF	20.00%	25V
C502		1-104-666-11	ELECT	220UF	20.00%	25V
C503		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C504		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C505		1-123-024-21	ELECT	33UF		160V
C507		1-102-228-00	CERAMIC	470PF	10.00%	500V
C508		1-107-654-11	ELECT	33UF	20.00%	250V
C509		1-106-379-12	MYLAR	0.033UF	10.00%	200V
C510		1-137-150-11	MYLAR	0.01UF	10.00%	100V
C520		1-126-964-11	ELECT	10UF	20.00%	50V
C521		1-126-964-11	ELECT	10UF	20.00%	50V
C552		1-137-194-81	FILM	0.47UF	5.00%	50V
C554		1-163-035-00	CERAMIC CHIP	0.047UF		50V
C555		1-126-949-11	ELECT	220UF	20.00%	35V
C556		1-163-038-91	CERAMIC CHIP	0.1UF		25V
C557		1-126-948-11	ELECT	100UF	20.00%	35V
C558		1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C559		1-106-220-00	MYLAR	0.1UF	10.00%	100V
C561		1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C562		1-106-220-00	MYLAR	0.1UF	10.00%	100V
C600		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C601	⚠	1-115-165-11	FILM	0.1UF	20.00%	275V
C602		1-117-752-11	ELECT(BLOCK)	330UF	20.00%	450V
C603		1-117-623-11	FILM	1500PF	3.00%	1.2KV
C604		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C605		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C606		1-104-666-11	ELECT	220UF	20.00%	25V
C607		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C608		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C609		1-162-962-11	CERAMIC CHIP	470PF	10.00%	50V
C610		1-126-948-11	ELECT	100UF	20.00%	35V
C611		1-162-965-11	CERAMIC CHIP	0.0015UF	10.00%	50V
C612	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C614		1-123-024-21	ELECT	33UF		160V
C615		1-102-228-00	CERAMIC	470PF	10.00%	500V
C616		1-126-943-11	ELECT	2200UF	20.00%	25V
C617		1-126-967-11	ELECT	47UF	20.00%	50V
C618		1-126-933-11	ELECT	100UF	20.00%	16V
C619	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C620		1-162-134-11	CERAMIC	470PF	10.00%	2KV
C626		1-106-383-00	MYLAR	0.047UF	10.00%	200V
C800		1-126-960-11	ELECT	1UF	20.00%	50V
C801		1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C802		1-106-375-12	MYLAR	0.022UF	99%	200V
C803		1-102-244-00	CERAMIC	220PF	10.00%	500V
C804		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C807		1-162-115-00	CERAMIC	330PF	10.00%	2KV
C808		1-106-365-00	MYLAR	0.0082UF	10.00%	200V
C809		1-107-364-11	MYLAR	0.01UF	10.00%	200V
C810		1-106-375-12	MYLAR	0.022UF	99%	200V
C811		1-107-957-11	ELECT	1UF	20.00%	250V
C812		1-117-665-11	FILM	0.33UF	5.00%	250V
C813		1-162-115-00	CERAMIC	330PF	10.00%	2KV
C814		1-117-646-11	FILM	12000PF	3.00%	1.2KV
C852		1-107-846-11	FILM	0.1UF	5.00%	250V

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REF NO.	PART NO.	DESCRIPTION		REMARK	
C856	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C857	1-126-964-11	ELECT	10UF	20.00%	50V
C858	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C859	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C860	1-208-834-11	METAL CHIP	150K	0.5%	1/10W
C861	1-130-202-00	FILM	0.022UF	5.00%	400V
C863	1-216-295-91	SHORT	0		
C865	1-126-933-11	ELECT	100UF	20.00%	16V
C866	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C867	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C868	1-162-995-11	CERAMIC CHIP	0.022UF		50V
C869	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C870	1-162-960-11	CERAMIC CHIP	220PF	10.00%	50V
C872	1-163-038-91	CERAMIC CHIP	0.1UF		25V
C873	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C874	1-162-974-11	CERAMIC CHIP	0.01UF		50V
C875	1-163-038-91	CERAMIC CHIP	0.1UF		25V
		<FILTER>			
CF355	1-234-686-21	FILTER, BAND PASS (F5.5C)			
		<#########>			
CLP001	4-352-844-01	PIN, LEAD, COATING			
CLP002	4-352-844-01	PIN, LEAD, COATING			
CLP003	4-352-844-01	PIN, LEAD, COATING			
		<CONNECTOR>			
CN003	* 1-508-797-00	PIN, CONNECTOR 4P			
CN101	1-695-915-11	TAB (CONTACT)			
CN200	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN300	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN500	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN520	* 1-564-506-11	PLUG, CONNECTOR 3P			
CN600	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN601	* 1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P			
CN602	1-580-843-11	PIN, CONNECTOR (POWER)			
		<TRIMMER>			
CT131	1-767-774-22	TRAP, CERAMIC			
CT139	1-767-775-22	TRAP, CERAMIC			
CT355	1-795-343-21	TRAP, CERAMIC (T55B)			
		<DIODE>			
D001	8-719-083-18	DIODE SPB-25MVWF			
D004	8-719-911-19	1SS119-25			
D005	8-719-109-85	RD5.1ESB2			
D007	8-719-159-10	RD5.1SB-T2			
D009	8-719-159-10	RD5.1SB-T2			
D103	8-759-157-40	UPC574J			
D104	8-719-914-42	DA204K			
D200	8-719-914-42	DA204K			
D202	8-719-988-61	1SS355TE-17			
D203	8-719-988-61	1SS355TE-17			
D304	8-719-063-66	RD2.2SB.T1			
D305	8-719-988-61	1SS355TE-17			
D306	8-719-109-54	RD2.2ES-B2			

REF NO.	PART NO.	DESCRIPTION	REMARK
D307	8-719-988-61	1SS355TE-17	
D308	8-719-988-61	1SS355TE-17	
D309	8-719-069-60	UDZSTE-179.1B	
D310	8-719-911-19	1SS119-25	
D311	8-719-070-15	NNCD8.2A-T1	
D312	8-719-069-60	UDZSTE-179.1B	
D314	8-719-908-03	GP08D	
D315	8-719-988-61	1SS355TE-17	
D318	8-719-988-61	1SS355TE-17	
D319	8-719-988-61	1SS355TE-17	
D320	8-719-988-61	1SS355TE-17	
D321	8-719-988-61	1SS355TE-17	
D322	8-719-069-60	UDZSTE-179.1B	
D323	8-719-069-60	UDZSTE-179.1B	
D324	8-719-069-60	UDZSTE-179.1B	
D325	8-719-069-60	UDZSTE-179.1B	
D326	8-719-988-61	1SS355TE-17	
D327	8-719-988-61	1SS355TE-17	
D400	8-719-988-61	1SS355TE-17	
D401	8-719-988-61	1SS355TE-17	
D403	8-719-069-60	UDZSTE-179.1B	
D404	8-719-069-60	UDZSTE-179.1B	
D406	8-719-069-60	UDZSTE-179.1B	
D407	8-719-069-60	UDZSTE-179.1B	
D408	8-719-069-60	UDZSTE-179.1B	
D500	8-719-911-19	1SS119-25	
D501	8-719-911-19	1SS119-25	
D502	8-719-302-43	EL1Z	
D503	8-719-302-43	EL1Z	
D504	8-719-302-43	EL1Z	
D520	8-719-911-19	1SS119-25	
D521	8-719-911-19	1SS119-25	
D552	8-719-908-03	GP08D	
D553	8-719-109-89	RD5.6ESB2	
D600	8-719-030-33	DIODE EG01CV1	
D601	8-719-077-77	D3SB60F3	
D602	8-719-928-08	ERD28-08S	
D603	8-719-110-39	RD15ES-B1	
D604	8-719-063-70	D1NL20U	
D605	8-719-063-70	D1NL20U	
D606	8-719-063-70	D1NL20U	
D608	8-719-312-10	RU4AM-T3	
D609	8-719-067-18	RN4Z	
D800	8-719-911-19	1SS119-25	
D802	8-719-908-03	GP08D	
D803	8-719-908-03	GP08D	
D804	8-719-081-00	DIODE BY228/A52A/	
D805	8-719-069-60	UDZSTE-179.1B	
D851	8-719-979-85	EGP20G	
D853	8-719-988-61	1SS355TE-17	
		<CONNECTOR>	
DY1	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
		<FERRITE BEAD>	
FB001	1-410-397-21	FERRITE 1.1UH	
FB100	1-410-397-21	FERRITE 1.1UH	
FB602	1-410-397-21	FERRITE 1.1UH	

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REF NO.	PART NO.	DESCRIPTION		REMARK
FB603	1-410-397-21	FERRITE	1.1UH	
FB800	1-410-397-21	FERRITE	1.1UH	
		<IC>		
IC001	8-752-925-64	IC CXP85224A-079S		
IC002	8-759-371-21	MM1319AFBE		
IC003	8-759-672-78	M24C08-BN6(A)		
IC004	8-742-225-20	IC SBX3081-21		
IC203	6-700-036-01	IC AN5279		
IC301	6-700-145-01	IC TDA8843/N2		
IC400	6-700-033-01	IC MM1501XNE		
IC402	8-759-100-96	UPC4558G2		
IC520	8-759-356-16	NJM4556AD		
IC551	8-759-835-98	IC AN5522		
IC601	8-749-019-42	IC STR-F6707A		
IC602	8-749-920-61	SE-135N		
IC604	8-759-459-99	PQ09RD11		
IC850	8-759-700-07	NJM2903M		
IC851	8-759-100-96	UPC4558G2		
		<JACK>		
J200	1-770-785-12	JACK		
J400	1-779-849-11	JACK BLOCK, PIN 4P		
J401	1-779-205-11	JACK, PIN 2P		
		<CHIP CONDUCTOR>		
JR001	1-216-295-91	SHORT	0	
JR003	1-216-295-91	SHORT	0	
JR012	1-216-295-91	SHORT	0	
JR013	1-216-295-91	SHORT	0	
JR014	1-216-295-91	SHORT	0	
JR015	1-216-295-91	SHORT	0	
JR017	1-216-295-91	SHORT	0	
JR018	1-216-295-91	SHORT	0	
JR020	1-216-295-91	SHORT	0	
JR030	1-216-295-91	SHORT	0	
JR035	1-216-295-91	SHORT	0	
JR100	1-216-295-91	SHORT	0	
JR202	1-216-295-91	SHORT	0	
JR300	1-216-295-91	SHORT	0	
JR304	1-216-295-91	SHORT	0	
		<COIL>		
L001	1-414-855-31	INDUCTOR	1UH	
L002	1-414-184-41	INDUCTOR	15UH	
L100	1-414-856-11	INDUCTOR	10UH	
L101	1-410-498-11	INDUCTOR	1.2UH	
L102	1-410-985-42	INDUCTOR	0.22UH	
L103	1-410-987-42	INDUCTOR	0.33UH	
L300	1-410-511-11	INDUCTOR	15UH	
L305	1-410-510-11	INDUCTOR	12UH	
L308	1-410-501-11	INDUCTOR	2.2UH	
L400	1-414-855-31	INDUCTOR	1UH	
L500	1-408-947-00	INDUCTOR	2.2MH	
L600	1-412-533-21	INDUCTOR	47UH	
L800	1-406-677-11	INDUCTOR	10MH	
L802	1-424-796-11	COIL, HORIZONTAL LINEARITY		
L803	1-414-493-41	INDUCTOR	4.7MH	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<PHOTO COUPLER>	
PH600	⚠ 8-749-010-64	PC123F2	
		<TRANSISTOR>	
Q001	8-729-421-19	UN2213	
Q002	8-729-421-19	UN2213	
Q003	8-729-010-25	MSD601-RT1	
Q004	8-729-010-25	MSD601-RT1	
Q005	8-729-010-25	MSD601-RT1	
Q100	8-729-010-25	MSD601-RT1	
Q102	8-729-022-54	TRANSISTOR 2SC3779C,D-AA	
Q105	8-729-010-25	MSD601-RT1	
Q106	8-729-010-25	MSD601-RT1	
Q201	8-729-010-25	MSD601-RT1	
Q204	8-729-026-49	2SA1037AK-T146-R	
Q204	8-729-216-22	2SA1162-G	
Q205	8-729-421-22	UN2211	
Q301	8-729-010-05	MSB709-RT1	
Q303	8-729-010-25	MSD601-RT1	
Q305	8-729-010-05	MSB709-RT1	
Q309	8-729-010-25	MSD601-RT1	
Q315	8-729-010-25	MSD601-RT1	
Q318	8-729-010-25	MSD601-RT1	
Q320	8-729-421-22	UN2211	
Q400	8-729-010-05	MSB709-RT1	
Q401	8-729-424-67	UN2216	
Q402	8-729-424-67	UN2216	
Q403	8-729-010-05	MSB709-RT1	
Q404	8-729-010-05	MSB709-RT1	
Q405	8-729-010-05	MSB709-RT1	
Q406	8-729-010-25	MSD601-RT1	
Q407	8-729-010-25	MSD601-RT1	
Q500	8-729-200-17	2SA1091-O	
Q520	8-729-423-33	2SC3311A-QRSTA	
Q800	8-729-140-50	2SC3209LK	
Q801	8-729-055-74	TRANSISTOR 2SD2624-CA	
Q802	8-729-050-48	TRANSISTOR IRF614-005	
Q850	8-729-010-25	MSD601-RT1	
Q851	8-729-010-05	MSB709-RT1	
		<RESISTOR>	

R001	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R002	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R003	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R004	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R005	1-216-043-91	RES-CHIP	560	5%	1/10W
R006	1-216-043-91	RES-CHIP	560	5%	1/10W
R007	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R008	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R009	1-216-037-00	RES-CHIP	330	5%	1/10W
R010	1-216-037-00	RES-CHIP	330	5%	1/10W
R011	1-216-295-91	SHORT	0		
R012	1-216-049-11	RES-CHIP	1K	5%	1/10W
R013	1-216-041-00	RES-CHIP	470	5%	1/10W
R014	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R015	1-216-025-11	RES-CHIP	100	5%	1/10W
R016	1-216-037-00	RES-CHIP	330	5%	1/10W
R017	1-216-049-11	RES-CHIP	1K	5%	1/10W

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R018	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R019	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R020	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R022	1-216-049-11	RES-CHIP	1K	5%	1/10W
R024	1-216-025-11	RES-CHIP	100	5%	1/10W
R025	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R026	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R027	1-216-101-00	RES-CHIP	150K	5%	1/10W
R028	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R029	1-216-025-11	RES-CHIP	100	5%	1/10W
R031	1-216-025-11	RES-CHIP	100	5%	1/10W
R032	1-216-049-11	RES-CHIP	1K	5%	1/10W
R033	1-216-073-91	RES-CHIP	10K	5%	1/10W
R034	1-216-073-91	RES-CHIP	10K	5%	1/10W
R035	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R036	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R037	1-216-049-11	RES-CHIP	1K	5%	1/10W
R038	1-216-049-11	RES-CHIP	1K	5%	1/10W
R039	1-216-043-91	RES-CHIP	560	5%	1/10W
R042	1-216-039-00	RES-CHIP	390	5%	1/10W
R043	1-216-025-11	RES-CHIP	100	5%	1/10W
R044	1-216-033-00	RES-CHIP	220	5%	1/10W
R045	1-216-073-91	RES-CHIP	10K	5%	1/10W
R046	1-208-816-11	METAL CHIP	27K	0.5%	1/10W
R047	1-216-025-11	RES-CHIP	100	5%	1/10W
R048	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R049	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R050	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R051	1-216-073-91	RES-CHIP	10K	5%	1/10W
R052	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R053	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R055	1-216-049-11	RES-CHIP	1K	5%	1/10W
R056	1-216-049-11	RES-CHIP	1K	5%	1/10W
R057	1-216-025-11	RES-CHIP	100	5%	1/10W
R058	1-216-025-11	RES-CHIP	100	5%	1/10W
R059	1-216-033-00	RES-CHIP	220	5%	1/10W
R060	1-216-033-00	RES-CHIP	220	5%	1/10W
R061	1-216-033-00	RES-CHIP	220	5%	1/10W
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R069	1-216-049-11	RES-CHIP	1K	5%	1/10W
R070	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R072	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R073	1-216-081-00	RES-CHIP	22K	5%	1/10W
R074	1-216-049-11	RES-CHIP	1K	5%	1/10W
R076	1-216-025-11	RES-CHIP	100	5%	1/10W
R077	1-216-025-11	RES-CHIP	100	5%	1/10W
R100	1-216-049-11	RES-CHIP	1K	5%	1/10W
R103	1-211-981-11	METAL CHIP	33	0.5%	1/16W
R106	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R107	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R108	1-216-041-00	RES-CHIP	470	5%	1/10W
R109	1-216-019-00	RES-CHIP	56	5%	1/10W
R115	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R117	1-216-081-00	RES-CHIP	22K	5%	1/10W
R118	1-216-041-00	RES-CHIP	470	5%	1/10W
R119	1-216-081-00	RES-CHIP	22K	5%	1/10W
R120	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R121	1-216-081-00	RES-CHIP	22K	5%	1/10W
R122	1-216-109-00	RES-CHIP	330K	5%	1/10W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R123	1-216-081-00	RES-CHIP	22K	5%	1/10W
R124	1-216-081-00	RES-CHIP	22K	5%	1/10W
R125	1-215-925-11	METAL OXIDE	22K	5%	3W
R128	1-216-025-11	RES-CHIP	100	5%	1/10W
R129	1-211-977-11	METAL CHIP	22	0.5%	1/16W
R130	1-216-049-11	RES-CHIP	1K	5%	1/10W
R133	1-249-389-11	CARBON	4.7	5%	1/4W
R200	1-216-073-91	RES-CHIP	10K	5%	1/10W
R201	1-216-295-91	SHORT	0		
R206	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R209	1-216-073-91	RES-CHIP	10K	5%	1/10W
R211	1-249-409-11	CARBON	220	5%	1/4W
R212	1-216-049-11	RES-CHIP	1K	5%	1/10W
R214	1-216-295-91	SHORT	0		
R221	1-216-025-11	RES-CHIP	100	5%	1/10W
R222	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R240	1-216-077-91	RES-CHIP	15K	5%	1/10W
R241	1-216-077-91	RES-CHIP	15K	5%	1/10W
R242	1-216-073-91	RES-CHIP	10K	5%	1/10W
R243	1-216-073-91	RES-CHIP	10K	5%	1/10W
R300	1-216-033-00	RES-CHIP	220	5%	1/10W
R302	1-216-033-00	RES-CHIP	220	5%	1/10W
R304	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R306	1-216-039-00	RES-CHIP	390	5%	1/10W
R307	1-216-033-00	RES-CHIP	220	5%	1/10W
R310	1-216-039-00	RES-CHIP	390	5%	1/10W
R311	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R312	1-216-033-00	RES-CHIP	220	5%	1/10W
R314	1-216-037-00	RES-CHIP	330	5%	1/10W
R316	1-216-031-00	RES-CHIP	180	5%	1/10W
R320	1-216-081-00	RES-CHIP	22K	5%	1/10W
R323	1-216-041-00	RES-CHIP	470	5%	1/10W
R327	1-216-049-11	RES-CHIP	1K	5%	1/10W
R328	1-216-025-11	RES-CHIP	100	5%	1/10W
R329	1-216-043-91	RES-CHIP	560	5%	1/10W
R330	1-216-295-91	SHORT	0		
R331	1-216-295-91	SHORT	0		
R332	1-216-295-91	SHORT	0		
R333	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R334	1-216-025-11	RES-CHIP	100	5%	1/10W
R335	1-216-025-11	RES-CHIP	100	5%	1/10W
R336	1-216-025-11	RES-CHIP	100	5%	1/10W
R337	1-216-073-91	RES-CHIP	10K	5%	1/10W
R338	1-216-077-91	RES-CHIP	15K	5%	1/10W
R339	1-216-035-00	RES-CHIP	270	5%	1/10W
R340	1-162-974-11	CERAMIC CHIP	0.01UF		50V
R342	1-216-295-91	SHORT	0		
R345	1-216-025-11	RES-CHIP	100	5%	1/10W
R348	1-216-025-11	RES-CHIP	100	5%	1/10W
R350	1-216-039-00	RES-CHIP	390	5%	1/10W
R352	1-216-073-91	RES-CHIP	10K	5%	1/10W
R353	* 1-208-852-11	METAL CHIP	820K	0.5%	1/10W
R354	* 1-208-852-11	METAL CHIP	820K	0.5%	1/10W
R355	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R356	1-216-049-11	RES-CHIP	1K	5%	1/10W
R357	1-216-101-00	RES-CHIP	150K	5%	1/10W
R358	1-216-025-11	RES-CHIP	100	5%	1/10W
R360	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.	PART NO.	DESCRIPTION		REMARK	
R361	1-216-033-00	RES-CHIP	220	5%	1/10W
R362	1-216-083-00	RES-CHIP	27K	5%	1/10W
R363	1-216-295-91	SHORT	0		
R364	1-216-077-91	RES-CHIP	15K	5%	1/10W
R365	1-216-295-91	SHORT	0		
R367	1-216-099-00	RES-CHIP	120K	5%	1/10W
R368	1-216-049-11	RES-CHIP	1K	5%	1/10W
R369	1-216-123-11	RES-CHIP	1.2M	5%	1/10W
R370	1-216-083-00	RES-CHIP	27K	5%	1/10W
R371	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R374	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R376	1-216-295-91	SHORT	0		
R381	1-216-295-91	SHORT	0		
R392	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R393	1-216-049-11	RES-CHIP	1K	5%	1/10W
R400	1-216-295-91	SHORT	0		
R401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R409	1-216-113-00	RES-CHIP	470K	5%	1/10W
R410	1-216-025-11	RES-CHIP	100	5%	1/10W
R411	1-216-049-11	RES-CHIP	1K	5%	1/10W
R412	1-216-049-11	RES-CHIP	1K	5%	1/10W
R413	1-216-113-00	RES-CHIP	470K	5%	1/10W
R414	1-216-049-11	RES-CHIP	1K	5%	1/10W
R415	1-216-073-91	RES-CHIP	10K	5%	1/10W
R416	1-216-073-91	RES-CHIP	10K	5%	1/10W
R417	1-216-021-00	RES-CHIP	68	5%	1/10W
R418	1-216-025-11	RES-CHIP	100	5%	1/10W
R420	1-216-049-11	RES-CHIP	1K	5%	1/10W
R421	1-216-049-11	RES-CHIP	1K	5%	1/10W
R423	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R424	1-216-091-00	RES-CHIP	56K	5%	1/10W
R425	1-211-990-11	METAL CHIP	75	0.5%	1/16W
R426	1-216-049-11	RES-CHIP	1K	5%	1/10W
R427	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R428	1-216-041-00	RES-CHIP	470	5%	1/10W
R429	1-216-073-91	RES-CHIP	10K	5%	1/10W
R430	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R432	1-216-121-11	RES-CHIP	1M	5%	1/10W
R433	1-216-091-00	RES-CHIP	56K	5%	1/10W
R434	1-216-049-11	RES-CHIP	1K	5%	1/10W
R437	1-211-990-11	METAL CHIP	75	0.5%	1/16W
R438	1-216-049-11	RES-CHIP	1K	5%	1/10W
R440	1-216-121-11	RES-CHIP	1M	5%	1/10W
R445	1-216-089-91	RES-CHIP	47K	5%	1/10W
R447	1-216-025-11	RES-CHIP	100	5%	1/10W
R500	1-260-126-11	CARBON	180K	5%	1/2W
R501	1-249-419-11	CARBON	1.5K	5%	1/4W
R502	1-216-370-11	METAL OXIDE	1.2	5%	2W
R503	1-216-091-00	RES-CHIP	56K	5%	1/10W
R504	1-216-091-00	RES-CHIP	56K	5%	1/10W
R505	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R506	1-260-125-11	CARBON	150K	5%	1/2W
R507	1-260-288-11	CARBON	0.47	5%	1/2W
R508	1-260-288-11	CARBON	0.47	5%	1/2W
R509	1-260-288-11	CARBON	0.47	5%	1/2W
R510	1-260-127-11	CARBON	220K	5%	1/2W
R511	1-215-449-00	METAL	15K	1%	1/4W
R512	1-215-453-00	METAL	22K	1%	1/4W
R513	1-215-445-00	METAL	10K	1%	1/4W
R514	1-249-421-11	CARBON	2.2K	5%	1/4W

REF NO.	PART NO.	DESCRIPTION		REMARK	
R520	1-216-073-91	RES-CHIP	10K	5%	1/10W
R521	1-216-073-91	RES-CHIP	10K	5%	1/10W
R522	1-216-073-91	RES-CHIP	10K	5%	1/10W
R523	1-216-081-00	RES-CHIP	22K	5%	1/10W
R524	1-216-081-00	RES-CHIP	22K	5%	1/10W
R525	1-216-295-91	SHORT	0		
R526	1-216-081-00	RES-CHIP	22K	5%	1/10W
R527	1-216-081-00	RES-CHIP	22K	5%	1/10W
R528	1-215-857-71	METAL OXIDE	10	5%	1W
R553	1-249-385-11	CARBON	2.2	5%	1/4W
R554	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R557	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R558	1-216-081-00	RES-CHIP	22K	5%	1/10W
R559	1-216-089-91	RES-CHIP	47K	5%	1/10W
R563	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R564	1-215-865-11	METAL OXIDE	220	5%	1W
R565	1-216-350-11	METAL OXIDE	1.2	5%	1W
R567	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R568	1-215-461-00	METAL	47K	1%	1/4W
R600	1-215-915-11	METAL OXIDE	470	5%	3W
R602	1-205-998-11	CEMENTED	1	5%	10W
R603	1-205-998-11	CEMENTED	1	5%	10W
R605	1-217-191-21	METAL	0.18	10%	2W
R606	1-216-045-00	RES-CHIP	680	5%	1/10W
R608	1-260-127-11	CARBON	220K	5%	1/2W
R609	1-216-091-00	RES-CHIP	56K	5%	1/10W
R610	1-215-926-00	METAL OXIDE	33K	5%	3W
R611	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R612	1-249-420-11	CARBON	1.8K	5%	1/4W
R614	1-216-396-11	METAL OXIDE	3.9	5%	3W
R615	1-215-877-11	METAL OXIDE	22K	5%	1W
R617	1-216-049-11	RES-CHIP	1K	5%	1/10W
R619	⚠ 1-218-265-11	METAL	8.2M	5%	1W
R620	1-249-389-11	CARBON	4.7	5%	1/4W
R623	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R624	1-260-126-81	CARBON	180K	5%	1/2W
R627	1-205-998-11	CEMENTED	1	5%	10W
R628	1-216-295-91	SHORT	0		
R800	1-216-049-11	RES-CHIP	1K	5%	1/10W
R801	1-216-081-00	RES-CHIP	22K	5%	1/10W
R802	1-215-917-11	METAL OXIDE	1K	5%	3W
R803	1-260-332-51	CARBON	2.2K	5%	1/2W
R806	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R808	1-249-421-11	CARBON	2.2K	5%	1/4W
R810	1-215-886-11	METAL OXIDE	100	5%	2W
R811	1-215-911-11	METAL OXIDE	100	5%	3W
R812	1-215-917-11	METAL OXIDE	1K	5%	3W
R813	1-216-049-11	RES-CHIP	1K	5%	1/10W
R814	1-215-917-11	METAL OXIDE	1K	5%	3W
R860	1-216-103-00	RES-CHIP	180K	5%	1/10W
R861	1-216-295-91	SHORT	0		
R862	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R863	1-216-073-91	RES-CHIP	10K	5%	1/10W
R864	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R865	1-216-073-91	RES-CHIP	10K	5%	1/10W
R866	1-216-049-11	RES-CHIP	1K	5%	1/10W
R867	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R868	1-249-393-11	CARBON	10	5%	1/4W
R869	1-249-381-11	CARBON	1	5%	1/4W
R870	1-208-838-91	METAL CHIP	220K	0.5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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REF NO.		PART NO.	DESCRIPTION			REMARK
R874		1-215-475-00	METAL	180K	1%	1/4W
R878		1-216-049-11	RES-CHIP	1K	5%	1/10W
R879		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R880		1-216-097-11	RES-CHIP	100K	5%	1/10W
R881		1-216-085-91	RES-CHIP	33K	5%	1/10W
R882		1-216-073-91	RES-CHIP	10K	5%	1/10W
R883		1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R884		1-216-089-91	RES-CHIP	47K	5%	1/10W
R885		1-216-073-91	RES-CHIP	10K	5%	1/10W
R886		1-216-295-91	SHORT	0		
R887		1-215-477-00	METAL	220K	1%	1/4W
R888		1-215-477-00	METAL	220K	1%	1/4W
R889		1-208-830-11	METAL CHIP	100K	0.5%	1/10W
			<SWITCH>			
S001		1-692-431-21	SWITCH, TACTILE			
S002		1-692-431-21	SWITCH, TACTILE			
S003		1-692-431-21	SWITCH, TACTILE			
S004		1-692-431-21	SWITCH, TACTILE			
S005		1-692-431-21	SWITCH, TACTILE			
S006		1-692-431-21	SWITCH, TACTILE			
S600	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
S800		1-572-707-11	SWITCH, LEVER			
			<#########>			
SWF100		1-577-169-12	SAWF			
			<TRANSFORMER>			
T503	⚠	1-453-329-31	TRANSFORMER ASSY FLYBACK (NX-4751//M)			
T600	⚠	1-431-746-11	TRANSFORMER, LINE FILTER			
T601	⚠	1-437-333-11	TRANSFORMER, CONVERTER (SRT)			
T800		1-435-374-11	TRANSFORMER, FERRITE (HDT)			
			<THERMISTOR>			
THP600		1-803-744-11	THERMISTOR, POSITIVE			
			<TUNER>			
TU100		8-598-591-00	TUNER, VSS BT-AG402			
			<CRYSTAL>			
X001		1-577-358-21	VIBRATOR, CERAMIC			
X300		1-567-505-11	OSCILLATOR, CRYSTAL			
X301		1-567-504-11	OSCILLATOR, CRYSTAL			

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* A-1332-200-A CV BOARD MOUNTED
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4-382-854-01 SCREW (M3X8), P, SW (+)

REF NO.		PART NO.	DESCRIPTION			REMARK
			<CAPACITOR>			
C701		1-115-350-51	CERAMIC	0.0047UF		2KV
C702		1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C703		1-107-651-11	ELECT	4.7UF	20.00%	250V
C704		1-130-202-00	FILM	0.022UF	5.00%	400V
C706		1-126-947-11	ELECT	47UF	20.00%	16V
C708		1-102-114-00	CERAMIC	470PF	10.00%	50V
C709		1-102-114-00	CERAMIC	470PF	10.00%	50V
C710		1-102-114-00	CERAMIC	470PF	10.00%	50V
C712		1-102-115-00	CERAMIC	560PF	10.00%	50V
C713		1-102-116-00	CERAMIC	680PF	10.00%	50V
C714		1-102-116-00	CERAMIC	680PF	10.00%	50V
C716		1-126-933-11	ELECT	100UF	20.00%	16V
C717		1-102-852-91	CERAMIC	47PF	5.00%	50V
C718		1-126-933-11	ELECT	100UF	20.00%	16V
C719		1-102-116-00	CERAMIC	680PF	10.00%	50V
			<CONNECTOR>			
CN701	*	1-564-508-11	PLUG, CONNECTOR 5P			
CN702		1-695-915-11	TAB (CONTACT)			
CN703	*	1-564-509-11	PLUG, CONNECTOR 6P			
CN704		1-695-915-11	TAB (CONTACT)			
			<DIODE>			
D701		8-719-911-19	1SS119-25			
D702		8-719-911-19	1SS119-25			
D703		8-719-911-19	1SS119-25			
D707		8-719-911-19	1SS119-25			
D708		8-719-911-19	1SS119-25			
D709		8-719-911-19	1SS119-25			
D713		8-719-911-19	1SS119-25			
D714		8-719-911-19	1SS119-25			
D715		8-719-911-19	1SS119-25			
D716		8-719-911-19	1SS119-25			
D717		8-719-070-16	NNCD9.1A-T1			
			<JACK>			
J701	⚠	1-540-071-22	SOCKET, CRT			
			<COIL>			
L701		1-414-185-41	INDUCTOR	22UH		
L710		1-414-186-31	INDUCTOR	33UH		
L711		1-414-185-41	INDUCTOR	22UH		
L712		1-414-185-41	INDUCTOR	22UH		
			<TRANSISTOR>			
Q704		8-729-326-11	2SC2611			
Q705		8-729-326-11	2SC2611			
Q706		8-729-326-11	2SC2611			
Q707		8-729-200-17	2SA1091-O			
Q708		8-729-200-17	2SA1091-O			
Q709		8-729-200-17	2SA1091-O			
Q710		8-729-119-78	2SC2785-HFE			
Q711		8-729-119-78	2SC2785-HFE			
Q712		8-729-119-78	2SC2785-HFE			

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

CV **F**

REF NO.		PART NO.	DESCRIPTION			REMARK
			<RESISTOR>			
R703		1-219-752-11	CARBON	100K	5%	1/2W
R706		1-215-417-00	METAL	680	1%	1/4W
R707		1-215-413-00	METAL	470	1%	1/4W
R708		1-216-387-11	METAL OXIDE	0.68	5%	3W
R710		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R711		1-260-330-11	CARBON	1.5K	5%	1/2W
R712		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R713		1-260-330-11	CARBON	1.5K	5%	1/2W
R714		1-216-486-00	METAL OXIDE	8.2K	5%	3W
R715		1-260-330-11	CARBON	1.5K	5%	1/2W
R716		1-249-923-11	CARBON	1K	5%	1/4W
R717		1-249-923-11	CARBON	1K	5%	1/4W
R718		1-249-923-11	CARBON	1K	5%	1/4W
R725		1-249-421-11	CARBON	2.2K	5%	1/4W
R726		1-249-421-11	CARBON	2.2K	5%	1/4W
R727		1-249-421-11	CARBON	2.2K	5%	1/4W
R728		1-249-408-11	CARBON	180	5%	1/4W
R729		1-249-408-11	CARBON	180	5%	1/4W
R730		1-249-408-11	CARBON	180	5%	1/4W
R731		1-249-407-11	CARBON	150	5%	1/4W
R732		1-249-407-11	CARBON	150	5%	1/4W
R733		1-249-407-11	CARBON	150	5%	1/4W
R734		1-219-743-11	CARBON	100	5%	1/2W
R738		1-247-807-31	CARBON	100	5%	1/4W
R739		1-247-807-31	CARBON	100	5%	1/4W
R740		1-247-807-31	CARBON	100	5%	1/4W
R755		1-249-418-11	CARBON	1.2K	5%	1/4W
R756		1-249-418-11	CARBON	1.2K	5%	1/4W
R757		1-249-418-11	CARBON	1.2K	5%	1/4W
			<VARIABLE RESISTOR>			
RV702		1-241-656-11	RES, ADJ, METAL FILM 110M			

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*	A-1241-499-A	F BOARD MOUNTED	
		**********	
	1-533-223-11	CLIP, FUSE	
		<CAPACITOR>	
C4601	⚠ 1-115-165-11	FILM	0.1UF 20.00% 275V
C4602	⚠ 1-117-703-11	CERAMIC	0.0047UF 99% 250V
		<CONNECTOR>	
CN4601	1-580-843-11	PIN, CONNECTOR (POWER)	
CN4602	1-580-843-11	PIN, CONNECTOR (POWER)	
CN4603	1-695-915-11	TAB (CONTACT)	

REF NO.		PART NO.	DESCRIPTION			REMARK
			<FUSE>			
F4601	⚠	1-532-237-00	FUSE, CYLINDRICAL (TIME-LAG) 3.15A/250V			
			<RESISTOR>			
R4601	⚠	1-202-719-00	SOLID	1M	10%	1/2W
			<TRANSFORMER>			
T4601	⚠	1-431-182-11	TRANSFORMER, LINE FILTER			
T4602	⚠	1-431-182-11	TRANSFORMER, LINE FILTER			
			<VARISTOR>			
VDR461		1-803-830-11	VARISTOR (ERZV14D621)			

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		MISCELLANEOUS	
		**********	
	⚠	1-419-479-11	COIL, DEGAUSSING
		1-452-032-00	MAGNET,DISC
		1-452-728-41	COIL, NA ROTATION (RT-154)
		1-505-547-21	SPEAKER (5X9CM)
		1-574-358-11	CORD, POWER (WITH CONNECTOR) 7.5A/250V
		1-900-212-58	LEAD ASSY, FOCUS
	⚠	8-451-505-11	DEFLECTION YOKE (Y21RSA-S)
	⚠	8-738-809-05	PICTURE TUBE (A51LPT70X)

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	ACCESSORIES AND PACKING MATERIALS	
	**********	
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
*	4-083-905-01	INDIVIDUAL CARTON
*	4-395-957-01	BAG, PROTECTION
	4-083-897-11	MANUAL, INSTRUCTION
	4-392-003-11	BAND, HOLD
	4-392-004-11	CLIP

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BATTERY COVER REMOTE COMMANDER	
**********	
1-418-163-51	REMOTE COMMANDER (RM-952)
9-939-697-01	BATTERY COVER REMOTE COMMANDER

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Products General Area

9-872-254-01

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